

HEALTH DEPARTMENT.

REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING THE YEAR

1918

WITH OBSERVATIONS UP TO JUNE 30TH, 1919.

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LIVERPOOL

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Table of Total Deaths registered in the City.

PREFACE.

The cessation of the war, and the consequent relaxation of the strain upon the various sections of the Health Department, enables fuller reference to be made to the highly important influences affecting the health of the city during the past year, and to set out more fully the statistics relating to the various branches of sanitary activity carried on by the Department. It is possible also to refer to several matters of importance calling for comment in regard to the first months of the current year.

The Birth Rate, which has been slowly declining for the past 25 years, experienced a very rapid drop from 30·0 in 1914 to 21·9 in 1918. This decline in the Birth Rate is a war condition dependent upon obvious causes. It implies that close upon 15,000 fewer infants were born during the years of war than would have been the case had the 1914 rate been maintained. The figures are given on page 3. Birth Rate.

The year 1918 was characterised by the severest outbreak of Influenza which has ever been known in the city, and as a result the rate of mortality for the year reached 19·5 as against 16·7 in the preceding year. The outbreak extended well into the early part of 1919. Mortality Rates.

Severe as this epidemic was in Liverpool, the visitation was less destructive than in many other large towns—London, for example, in which some 18,000 victims succumbed, the total deaths from all causes actually exceeding the births during the year.

The ravages of this disease are fully dealt with in the text of the Report, from which it will be seen that neither age, sex, social position, nor the physical state of the patient, afforded protection against it. The relative destruction of life was greatest at the earlier and the later age-periods.

Apart from influenza, the incidence of infectious sickness, with the single exception of whooping-cough, has not exceeded the normal to any great extent. Whooping-cough showed a slight increase over the average. Zymotic Diseases.

No cases of plague were reported during the year, nor of plague rats, notwithstanding the continuous routine bacteriological examination of these animals throughout the year. Only two cases of typhus fever were notified, and two cases of smallpox were landed from vessels during the year.

Alcoholism.

The decline in the number of deaths from excessive drinking which accompanied the restrictions upon the sale of alcoholic liquor is remarkable, the mortality being approximately one-eighth of what it was in 1914, the most marked decline being in the case of women. Rates of mortality are not the only index to the value of the limitations imposed upon the sale of drink; with this remarkable decline is associated the equally cogent evidence of the diminution in destitution, child neglect, violence and disorder, and this cannot be regarded as other than confirmatory evidence of the value of the restrictions imposed, and of the necessity for their continuance.

Venereal Diseases.

One of the most remarkable of recent developments in sanitary administration is that relating to venereal diseases. This subject is fully dealt with on pages 62 to 67, and it is only necessary to say here that, whilst the success attending the measures directed against these diseases is highly satisfactory, it is obvious that a really adequate return for the time and money expended in dealing with them cannot be secured until fuller legislation on the lines indicated in the Report enables action to be taken analagous to that which has proved so successful in dealing with other forms of infection.

Sanatorium and Hospital Accommodation.

The opening of the Sanatorium at Fazakerley, and the recovery of the Fazakerley Hospital from the Military Authorities, has rendered a considerable number of beds available for pulmonary tuberculosis, and the list of patients waiting for admission has diminished to the same extent. There can be no doubt that the closer examination by Recruiting Medical Boards to which large numbers of men have been subjected has brought to light many cases of latent disease previously unsuspected. This circumstance explains to a certain degree the apparent increase in the numbers of cases.

The Sanatorium will prove an invaluable addition to the measures directed against tuberculosis, and will fully reward the efforts of those who have laboured to provide the city with an institution of the first order, alike in site, construction, and administration.

Developments continue without interruption in regard to the welfare of motherhood and infancy, a subject which calls for exceedingly patient and careful methods of procedure, the success of measures adopted being largely dependent upon the tact and interest of those engaged in the work. Difficulties of an unusual kind have been experienced during the last few years in connection with the milk depots, but the periodical shortage of milk has been met by the more extended use of dried milk.

Maternity
and Child
Welfare.

As heretofore, the Midwives' Association have at all times rendered very valuable help to the Department.

Statistical details relating to the work of the hospitals are inserted, and the rapid progress of events at Fazakerley, consequent upon the orders given to the local Military Authorities to evacuate, have placed at the disposal of the city what is perhaps the finest series of residential hospital institutions in the kingdom. The value of these institutions has been proved in the past, and there is no question at all that the outlook, on account of their more extended use, is most promising.

Infectious
Diseases
Hospitals.

It is an extremely difficult matter to gauge the effect upon the public health of the restriction and rationing of food and fuel. One great result which has been achieved in regard to foodstuffs has been to bring about great economies in avoiding waste in the use of foods, and also in the substitution of one class of food for another class, whilst higher wages and the fuller employment available have enabled the higher prices demanded to be paid. Inconveniences, more or less considerable, have been experienced, but there are no evidences pointing to any real hardship over and above that which is experienced in normal times, and which may be ascribed to many and varying causes.

Effect of
Rationing.

RETROSPECT.

So far as figures can convey it, a general indication of the saving of life and of improvement in the health of the inhabitants will be found in some of the following tables. But tables can furnish but little evidence—hardly, indeed, a suggestion—of the difficulties encountered and overcome in bringing about these results.

Retrospect.

With the possession of some 1,500 beds for isolation purposes it is difficult to visualise that even so recently as 1883 the authorities responsible for the health of the city were without one single hospital bed for the

Lack of
Hospital
accommoda-
tion for
Infectious
Diseases.

isolation of a case of infectious disease ; the consequences accompanying such a condition in a great sea-port may be imagined. Outbreaks, great or small, in ordinary households, in business establishments, hotels, institutions, schools, or amongst arrivals by sea or overland, ran their course with but feeble and ineffective measures available to check the spread of infection.

We must not be unmindful of the admirable services rendered at such times by those whose duty it was to provide for the destitute—destitution frequently being the result of infectious sickness.

Tuberculosis. For many years tuberculosis received no special attention, its necessities were obscured by the mass of other disease calling for attention. No special measures of prevention were even mentioned, nor were they at that stage of public opinion even possible.

The provision of hospital accommodation has proved one essential in the series of measures which have practically exterminated more than one of the infections formerly so rife, and these institutions are now being used with equally successful results in other directions in regard to other forms of infection.

Housing. At the same date (1883) the question of housing and the demolition of slums was slowly arresting public attention, but the available legislation for dealing with insanitary areas was cumbersome, costly, and ineffective. Efforts to deal with houses unfit for human habitation were strongly resisted at every step, the services of long arrays of counsel eminent at the Bar being availed of by the owners—the City Council on its side, however, were fortunate in securing counsel equally eminent. One incidental advantage of this procedure was to confirm and establish the record of the evil consequences of this property in a manner which no other procedure could have done.

It is interesting to recall that at, or about, this date one of Liverpool's great philanthropists had endeavoured to make a beginning by the personal purchase, for demolition, of a few slum streets conspicuous as foci of disease.

Until checked by the war the work of regenerating the insanitary areas had increased steadily year by year, each succeeding effort being rendered more easy by the gradual enlightenment of public opinion and by improved legislation which the Council sought and obtained.

Many years elapsed before the City Council caused effective means to be taken to deal with cellar dwellings, the absence of a wholesome public opinion on the matter proving a serious drawback.

Cellar
Dwellings.

The care of children received one of its earliest stimuli on the formation of the Liverpool Society for the Protection of Children in 1883, a Society which was largely instrumental in causing the absolute disappearance from the city of the grosser forms of child neglect and cruelty. The country was quick to follow this example by the formation of a National Society, designed with the same objects.

Care of
Children.

One of the most valuable of administrative measures, viz., the Medical Inspection of School Children, gradually evolved from the beginning of the year 1908, commenced tentatively with the appointment of a single medical officer, but the value of the work was soon manifested, and the staff has now been increased to eight whole-time medical officers and four part-time medical officers.

Medical
Inspection of
School
Children.

The object of this inspection is "preventive" in its character, that is to say, the detection of any latent or incipient condition which if unremedied would result in threatening the future health and welfare of the child.

Not less interesting is the development of the measures adopted to advance the welfare of motherhood and infancy. As other and more obtrusively urgent sanitary claims were disposed of, closer attention to this subject became possible, and from small beginnings there has gradually developed a very wide system by which the expectant mother, as well as the infant, can be periodically advised as to the prevention of sickness and the care of the individual health. Furthermore, a suitable food is provided for infants whose mothers are not able to suckle them, and many thousands have been fed in this way.

Welfare of
Motherhood
and Infancy.

Day Nurseries have been established, following largely the example of the voluntary bodies, who deserve full credit for originally starting these places.

The midwives have co-operated in every way likely to minimise and prevent dangers and untoward incidents in connection with child-birth. Nor must the valuable work in connection with the prevention of blindness amongst infants pass without mention.

Co-operation
of Midwives.

Sanitary
Improve-
ments.

Scavenging.

Many other sanitary questions of great importance have been dealt with during the period indicated, including the improvement of the water supply, the greater facilities furnished by additions to the number of baths and wash-houses, the recognition of the importance of a pure milk supply and the action necessary to secure this, and the provision of parks and gardens and open spaces. In this latter particular the advance has been almost phenomenal, and it has also been of a most striking kind in regard to cleansing. As an illustration, it may be mentioned that in 1883 there were many streets with long pits extending from one end of the street to the other which remained undisturbed throughout the entire summer months, the methods of removal then in vogue having been attended and followed by accentuated outbreaks of choleraic disease of an extremely grave character during the summer.

Ministry of
Public
Health, its
objects and
limitations.

The spade-work of all these years, and consequent better public appreciation of the results of sanitary measures, bring us to a good starting point for the new era which it is hoped may result from the establishment of the Ministry of Health, which is understood to be a Ministry dominated with the object of preventing disease and promoting health, and not dominated with the object of providing treatment for disease after it has arisen, nor subordinating health interests to false economic aims. But it must be remembered that in the past the impulse to sanitary advance has come from the periphery—such as the great centres of population—and should this impulse cease or be lessened in any way, nothing which a Ministry of Health may undertake can replace it.

Additional
Parliamen-
tary
Powers.

Finally, it may be well to call attention to the series of clauses which should find place in the next application to Parliament for powers to meet local necessities. It may be perfectly true that many of these clauses would appropriately find a place in general legislation applicable to the whole country, but the past experiences of Liverpool have shown the necessity to proceed for legislation to meet its own needs.

The indebtedness of the city to the pioneer enterprise and example of voluntary associations has been evidenced in many directions. The spirit of civic service is, happily, as fully alive at the present time as ever it was, and a more cordial co-operation will follow as public opinion becomes more educated and enlightened upon Health matters.

E. W. HOPE,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
MUNICIPAL OFFICES,
LIVERPOOL, 1st August. 1919.

STATISTICS

RELATING TO

BIRTHS, DEATHS, AND CAUSES OF DEATH, &c.,
ZYMOTIC DISEASES AND THEIR INCIDENCE.

SUMMARY

OF

VITAL STATISTICS FOR 1918.

Area of City	21,219	Acres.
		(33 square miles)
Population (estimated to the middle of the year)	781,948	
Births	17,133,	Birth-rate 21·9.
Deaths	15,267,	Death-rate 19·5.
Infantile Mortality	2,137	Deaths under one year.
Infant Mortality Rate	124	per 1,000 Births.
Zymotic Death-rate (7 principal Zymotic Diseases)	1·9	per 1,000.
All forms of Tuberculosis (including Phthisis)... ..	2·3	per 1,000.
Phthisis Death-rate	1·8	per 1,000.

BIRTHS.

The number of births recorded during the year 1918 within the City was 17,133, equal to a rate of 21·9 per 1,000 of the population, the average of the previous five years (1913-1917) being 27·4. The rates are calculated upon the corrected population as ascertained by the Census Returns of 1901 and 1911. Of the total births 8,839 were males and 8,294 were females. The number of illegitimate births was 924, or 5·4 per cent. of the total births, 483 being males and 441 females.

The Registrar General intimated that 142 of the births registered in the City should be deducted as non-resident, and this has accordingly been done, the above figures being the net numbers after the deduction has been made.

The birth-rate in the City of Liverpool is considerably above the average of the great towns, which is 17·6 per 1,000 of the population, as well as of England and Wales taken as a whole, where the rate is 17·7 per 1,000.

For many years past there has been a steady diminution of the birth-rate, which in 1914 was 30 per 1,000 of the population. Since the outbreak of war, and owing to so many men being called to service overseas, there has been a very rapid decline which reached its maximum last year, and the following table shows the decline in the rate and the reduction in the number of actual births which has taken place during this period:—

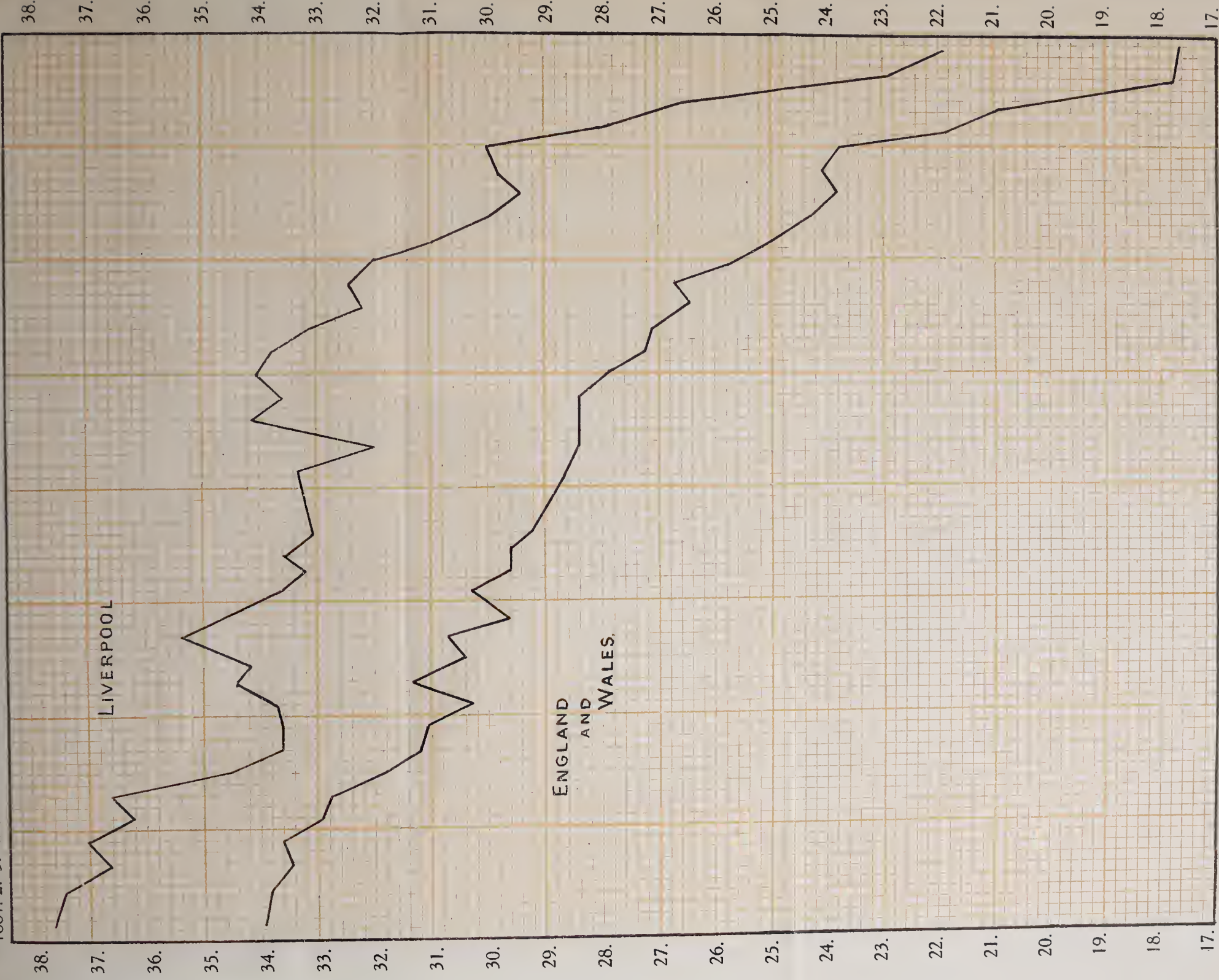
					Actual Births.	Rate.	Actual Decrease from 1914.
1914	...	...	...	...	23,065	30·0	—
1915	...	...	...	...	21,586	27·9	1,479
1916	...	...	...	...	20,679	26·6	2,386
1917	...	...	...	...	17,906	22·9	5,159
1918	...	...	...	...	17,133	21·9	5,932
							14,956

The variations in the birth-rate, and the distribution of the births in the different wards and districts of the city for the year 1918 have been arranged in the following tables:—

The following table shows the population, number of births and deaths, and the rates per 1,000 in each district of the City for the year 1918:—

Districts.	Estimated Population	BIRTHS.		DEATHS.	
		Number of Births.	Rate per 1,000.	Number of Deaths.	Rate per 1,000.
SCOTLAND	44,542	1,324	29·7	1,322	29·7
EXCHANGE	35,573	858	24·1	1,081	30·3
ABERCROMBY	42,219	850	20·1	956	22·6
EVERTON	120,150	2,954	24·6	2,531	21·0
KIRKDALE	66,933	1,671	25·0	1,462	21·8
WEST DERBY (WEST) ...	85,077	1,998	23·5	1,573	18·5
TOXTETH	100,259	2,535	25·3	2,218	22·1
WALTON	86,824	1,543	17·8	1,154	13·3
WEST DERBY (EAST) ...	73,101	1,301	17·8	1,116	15·2
WAVERTREE	48,445	766	15·8	615	12·7
TOXTETH (EAST)... ..	36,611	561	15·3	430	11·7
GARSTON	28,764	576	20·0	440	15·3
FAZAKERLEY	6,482	92	14·2	67	10·3
WOOLTON	6,968	104	14·9	111	15·9
NO ADDRESS ... ..	...	...	...	191	...
	781,948	17,133	21·9	15,267	19·5

1881. 2. 3. 4. 5. 6. 7. 8. 9. 90. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 1. 2. 3. 4. 5. 6. 7. 8.



20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

The following table shows the population, number of births, and the corrected birth-rate per 1,000 during the last twenty-six years:—

| Year. | Population. | No. of Births. | Rate per 1,000. |
|-------------------|-------------|----------------|-----------------|
| 1893 | 520,882 | 18,328 | 35·2 |
| 1894 | 522,178 | 17,893 | 34·3 |
| ¹ 1895 | 652,523 | 22,006 | 33·7 |
| 1896 | 658,050 | 21,943 | 33·3 |
| 1897 | 663,633 | 22,280 | 33·6 |
| 1898 | 669,243 | 22,227 | 33·2 |
| 1899 | 674,912 | 22,488 | 33·3 |
| 1900 | 680,628 | 22,762 | 33·4 |
| 1901 | 686,332 | 21,980 | 32·0 |
| ² 1902 | 707,027 | 24,283 | 34·2 |
| 1903 | 710,874 | 23,910 | 33·6 |
| 1904 | 714,743 | 24,278 | 33·9 |
| ³ 1905 | 721,864 | 24,350 | 33·7 |
| 1906 | 726,100 | 24,123 | 33·2 |
| 1907 | 730,361 | 23,654 | 32·3 |
| 1908 | 734,648 | 23,891 | 32·5 |
| 1909 | 738,960 | 23,591 | 31·9 |
| 1910 | 743,295 | 23,054 | 31·0 |
| 1911 | 747,627 | 22,493 | 30·0 |
| 1912 | 752,021 | 22,233 | 29·5 |
| ⁴ 1913 | 756,553 | 22,555 | 29·8 |
| 1914 | 767,992 | 23,065 | 30·0 |
| 1915 | 772,595 | 21,586 | 27·9 |
| 1916 | 777,247 | 20,679 | 26·6 |
| 1917 | 781,948 | 17,906 | 22·9 |
| 1918 | 781,948 | 17,133 | 21·9 |

The foregoing table shows the decrease in the birth-rate during the last 26 years.

The rates have been calculated upon the corrected population as ascertained by the Census Returns of 1891, 1901, and 1911.

¹ City area extended, a population of 129,045 included.

² Garston included with a population of 17,289.

³ Fazakerley included with a population of 2,892.

⁴ Woolton, Allerton and Childwall included with a population of 6,882.

DEATHS.

The following table shows the population, number of deaths, and the corrected death-rate per 1,000 during the last twenty-six years:—

| Year. | Population. | No. of Deaths. | Rate per 1,000. |
|-------------------|-------------|----------------|-----------------|
| 1893 | 520,882 | 13,919 | 26·7 |
| 1894 | 522,178 | 12,073 | 23·1 |
| ¹ 1895 | 652,523 | 16,215 | 24·8 |
| 1896 | 658,050 | 14,060 | 21·4 |
| 1897 | 663,633 | 15,117 | 22·8 |
| 1898 | 669,243 | 14,853 | 22·2 |
| 1899 | 674,912 | 16,276 | 24·1 |
| 1900 | 680,628 | 15,785 | 23·1 |
| 1901 | 686,332 | 14,879 | 21·6 |
| ² 1902 | 707,027 | 15,396 | 21·7 |
| 1903 | 710,874 | 14,240 | 20·0 |
| 1904 | 714,743 | 15,851 | 22·1 |
| ³ 1905 | 721,864 | 14,103 | 19·5 |
| 1906 | 726,100 | 15,001 | 20·6 |
| 1907 | 730,361 | 13,676 | 18·7 |
| 1908 | 734,648 | 13,930 | 18·9 |
| 1909 | 738,960 | 13,945 | 18·8 |
| 1910 | 743,295 | 13,343 | 17·9 |
| 1911 | 747,627 | 14,607 | 19·5 |
| 1912 | 752,021 | 13,364 | 17·7 |
| ⁴ 1913 | 756,553 | 13,658 | 18·0 |
| 1914 | 767,992 | 15,046 | 19·5 |
| 1915 | 772,595 | 14,478 | 18·7 |
| 1916 | 777,247 | 13,943 | 17·9 |
| 1917 | 781,948 | 13,093 | 16·7 |
| 1918 | 781,948 | 15,267 | 19·5 |

¹ City area extended.

² Garston included.

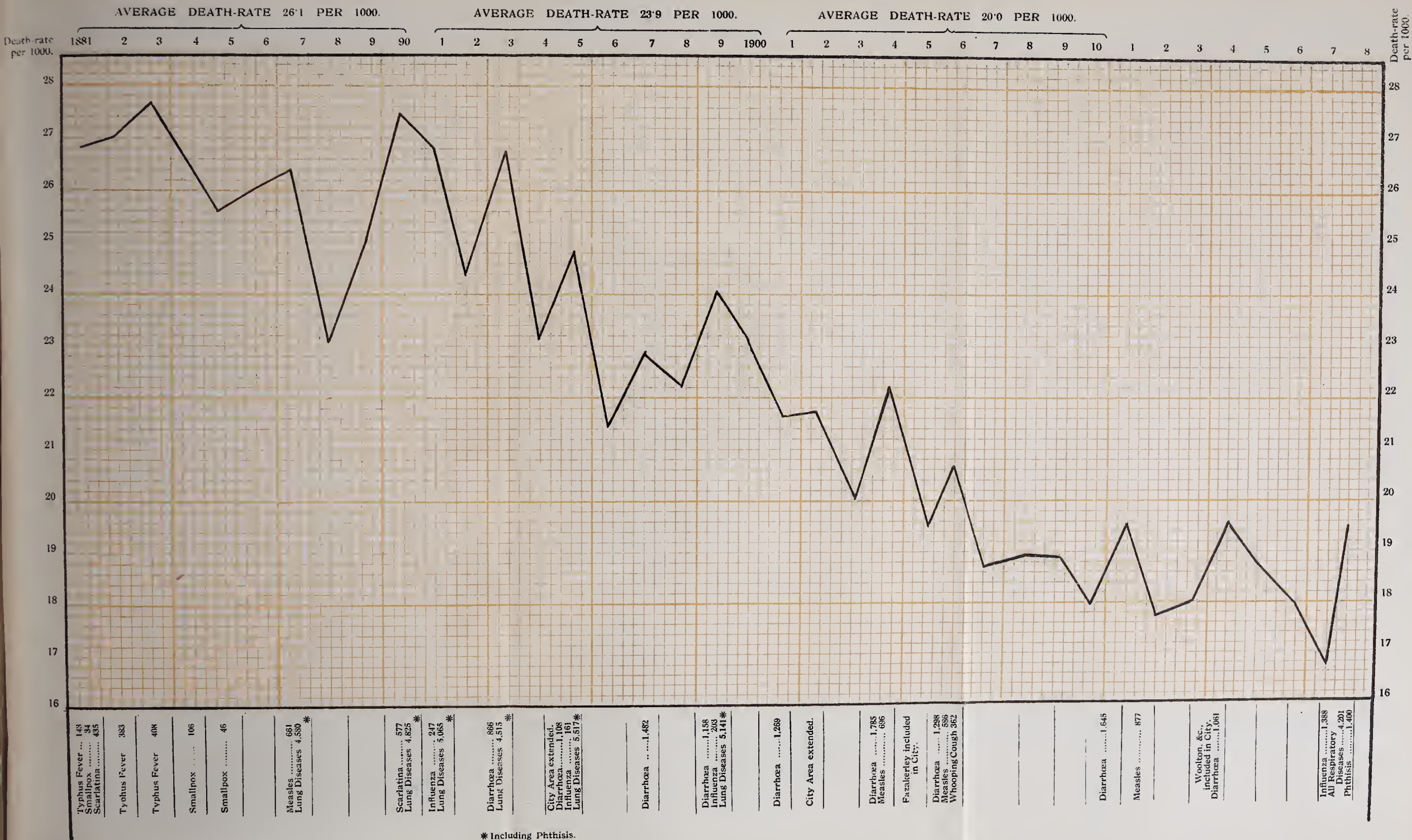
³ Fazakerley included.

⁴ Woolton, Allerton and Childwall included.

NOTE.—The rates have been calculated upon the corrected population as ascertained by the Census Returns of 1891, 1901, and 1911.

CITY OF LIVERPOOL.

DEATH RATE, 1881-1918.



1917

WEATHER BUREAU

100 90 80 70 60 50 40 30 20 10 0

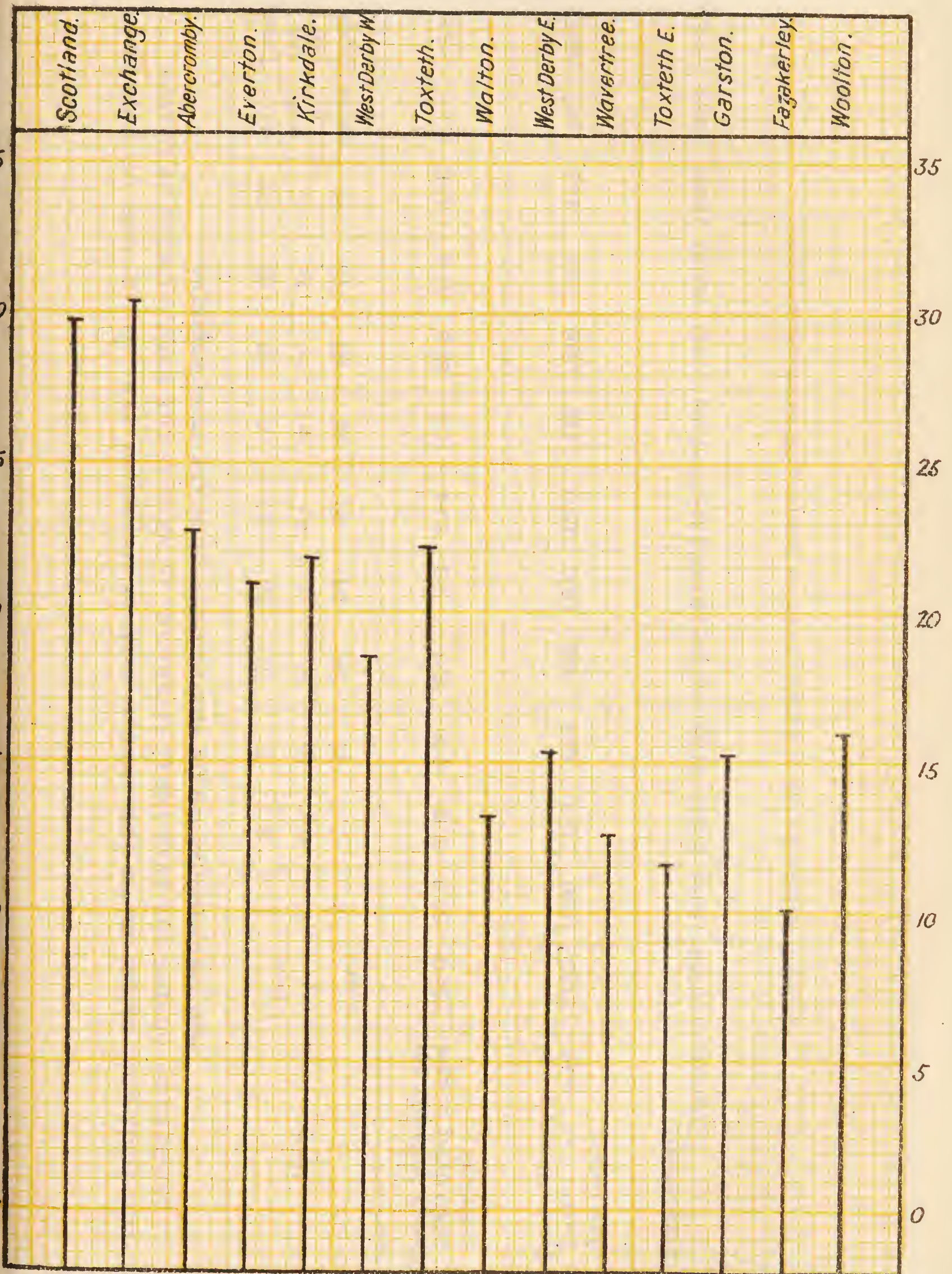


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2 - 100
1 - 100

CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1,000 in the different districts of the City during the year 1918.

Deaths in Public Institutions are transferred to the Districts from whence the Patients came.



Comparative view of the Local Rate per £100 in the various
 districts of the City during the year 1915.

Results on Public Improvements and Sanitation in the Districts
 from 1905 to the present year.



THE FOLLOWING TABLE SHOWS THE ANNUAL RATE OF MORTALITY PER 1,000 AT EACH OF TWELVE AGE-PERIODS DURING THE YEAR 1918 IN LIVERPOOL, AS WELL AS THE TOTAL NUMBER OF DEATHS.

THE DIFFERENCES WHICH THE FIGURES SHOW ARE VERY STRIKING:—

| 1918. | *
Under
1
year. | 1
to
2 | 2
to
5 | 5
to
10 | 10
to
20 | 20
to
30 | 30
to
40 | 40
to
50 | 50
to
60 | 60
to
70 | 70
to
80 | 80
and
up-
wards. | Total
at
all
Ages. |
|---|--------------------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|-----------------------------|
| Rate of Mortality per
1,000 living at ages
indicated. | 124.0 | 60.8 | 20.6 | 7.3 | 6.0 | 9.2 | 10.4 | 16.4 | 28.8 | 51.4 | 95.6 | 191.6 | 19.5 |
| Total Number of
Deaths at each
Age-Period. | 2137 | 1096 | 1183 | 640 | 895 | 1200 | 1294 | 1434 | 1646 | 1801 | 1468 | 473 | 15267 |
| Approximate
Population | 19738 | 18008 | 57315 | 87265 | 147528 | 130667 | 123870 | 87562 | 57141 | 35039 | 15346 | 2469 | 781948 |

* Column I. indicates the rate of mortality under one year per 1,000 births during the year.

The total death-rate of the City during the year was 19·5 per 1,000; the average rate of the preceding five years (1913-1917) being 18·2. The increased rate for 1918 was entirely due to the epidemic of Influenza which prevailed during a portion of the third quarter and during the whole of the last quarter of the year. Full statistical details in regard to the various causes of death are set out in the tables to be found in the Appendix.

The deaths in public institutions numbered 6,537, and included 1,479 persons who were either non-residents in the City area or non-civilians. The various institutions are shown in the following table:—

| | | | | | Total
Deaths. | Non-resident
or non-civilian. |
|------------------------------------|-----|-----|-----|-----|------------------|----------------------------------|
| Parish Institution (Brownlow Hill) | ... | ... | ... | ... | 1,108 | 21 |
| Royal Infirmary | ... | ... | ... | ... | 284 | 83 |
| Children's Infirmary | ... | ... | ... | ... | 277 | 26 |
| Maternity Hospital | ... | ... | ... | ... | 49 | 2 |
| Consumption Hospital | ... | ... | ... | ... | 20 | 2 |
| Hahnemann Hospital | ... | ... | ... | ... | 4 | 1 |
| Samaritan Hospital | ... | ... | ... | ... | 7 | 1 |
| Eye and Ear Infirmary | ... | ... | ... | ... | 8 | 3 |
| David Lewis Northern Hospital | ... | ... | ... | ... | 205 | 55 |
| Stanley Hospital | ... | ... | ... | ... | 100 | 35 |
| Royal Southern Hospital | ... | ... | ... | ... | 175 | 41 |
| Mill Road Infirmary | ... | ... | ... | ... | 348 | 84 |
| Hospital for Women | ... | ... | ... | ... | 27 | 16 |
| City Hospital North | ... | ... | ... | ... | 83 | 4 |
| Do. South | ... | ... | ... | ... | 60 | 1 |
| Do. Parkbill | ... | ... | ... | ... | 67 | — |
| Do. East, Mill Lane | ... | ... | ... | ... | 173 | 6 |
| Do. Fazakerley | ... | ... | ... | ... | 56 | 2 |
| Do. Sparrow Hall | ... | ... | ... | ... | 27 | 26 |
| Do. Garston | ... | ... | ... | ... | 21 | 3 |
| Carried forward | | | | | 3,099 | 412 |

| | | | | |
|--------------------------------------|-----|-----|-----------------|-----------------|
| Brought forward | ... | ... | 3,099 | 412 |
| Walton Institution (Rice Lane) | ... | ... | 1,733 | 270 |
| Belmont Road Institution | ... | ... | 233 | 193 |
| Highfield Infirmary | ... | ... | 4 | 4 |
| St. Joseph's Home | ... | ... | 52 | 11 |
| Toxteth Institution (Smithdown Road) | ... | ... | 609 | 47 |
| Home for Incurables | ... | ... | 12 | 2 |
| House of Providence | ... | ... | 7 | 7 |
| Tuebrook Villa Asylum | ... | ... | 5 | 2 |
| Turner Memorial Home | ... | ... | 5 | 2 |
| St. Augustine's Home | ... | ... | 23 | 7 |
| Kirkdale Home | ... | ... | 20 | 20 |
| Alder Hey Hospital | ... | ... | 212 | 40 |
| H.M. Prison, Walton | ... | ... | 2 | — |
| Other Institutions | ... | ... | 521 | 462 |
| | | | — | — |
| | | | 6,537 | 1,479 |
| | | | <u> </u> | <u> </u> |

INFECTIOUS SICKNESS.

The close association of Liverpool with other parts of the world, consequent upon the volume of its shipping, renders it peculiarly liable to the importation of infectious disease and, in view of this, it is gratifying to observe the remarkable freedom from all the more formidable forms of sickness of that character.

There were no cases of plague during the year. The safeguarding measures, such as the catching and examination of rats and other precautionary action in and amongst the warehouses and docks, were carried on as usual.

Two cases of smallpox were landed from vessels during the year. The first case occurred in June and the second in December, both being removed to the Port Sanitary Hospital, New Ferry.

There were two cases of typhus fever notified. The history attached to these cases was that the mother of the patients had visited her brother, who had been seized with what was described as a "sudden illness," at a common lodging-house, and died the same day. She subsequently became unwell, and was admitted, with her children, to one of the institutions in the City, where she died five days after admission, the cause of death being given as broncho-pneumonia; the two children of this woman were afterwards found to be suffering from typhus fever, and removed to the Infectious Diseases Hospital, where they recovered from the disease. The usual measures of the visitation of contacts, disinfection of houses, etc., were taken, and there was happily no extension of the disease.

Enteric Fever showed a slight increase during the year, 65 cases occurring amongst the civilian population, and 11 landed from ships. The number of deaths was 13, as compared with the average of 35 during the previous ten years.

Scarlet Fever showed an increase, the cases being distributed with fairly equal prevalence over the whole of the year, with the exception of the month of July, when the total number of cases coming under the notice of the Medical Officer of Health fell below 200. The deaths numbered 133, the average for the previous ten years being 122.

There was also an increase in the number of cases of diphtheria, the greatest prevalence occurring during the latter half of the year; the deaths numbered 228.

Seventeen cases of cerebro-spinal fever were recorded, the number of deaths being 12. Of the total cases, 12 received hospital treatment. The usual investigations were made in each case, and in some bacteriological examination was carried out. Contacts were kept under observation, and the various premises disinfected.

Six cases of poliomyelitis came under notice during the year, two of which were removed to hospital and five died. The usual measures of disinfection, &c., were carried out.

Ten cases of anthrax were notified, all of which recovered. There were also two cases which occurred amongst American Troops.

The number of cases of measles was slightly above that for the year 1917, the greatest prevalence occurring from March to June. The number of deaths, however, was less than in the previous year.

The deaths from whooping cough numbered 364.

INFLUENZA.

The world-wide epidemic of Influenza which occurred in the course of the year 1918-19, though the most severe for many years, is not unique. Similar outbreaks or pandemics were reported in 1803, 1833, 1847-8, and 1889-92. In Liverpool the last considerable outbreak accompanied by a noteworthy mortality was in 1908, when 141 deaths from Influenza were recorded. The deaths in subsequent years were as follows:—

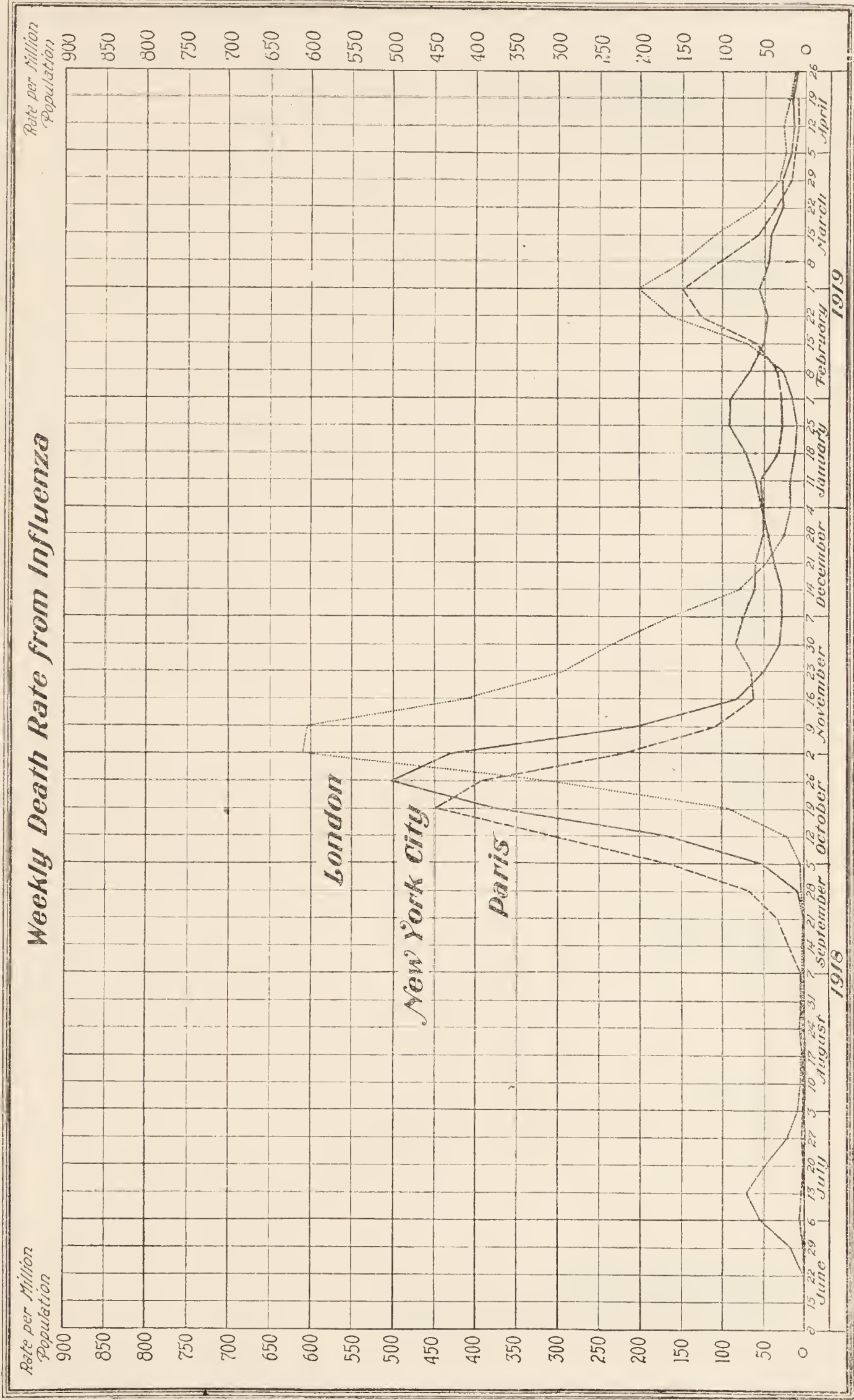
| | | | | | |
|------|-----|-----|-----|-----|------------|
| 1909 | ... | ... | ... | ... | 84 deaths. |
| 1910 | ... | ... | ... | ... | 80 „ |
| 1911 | ... | ... | ... | ... | 71 „ |
| 1912 | ... | ... | ... | ... | 50 „ |
| 1913 | ... | ... | ... | ... | 53 „ |
| 1914 | ... | ... | ... | ... | 78 „ |
| 1915 | ... | ... | ... | ... | 100 „ |
| 1916 | ... | ... | ... | ... | 171 „ |
| 1917 | ... | ... | ... | ... | 55 „ |
| 1918 | ... | ... | ... | ... | 1,388 „ |

It will be observed that the mortality from Influenza was increasing during the first three years of the war. In 1916-17 cases of “Purulent Bronchitis,” accompanied by a considerable mortality, began to be noticed in the British Army in France. During 1917 definite outbreaks of Influenza were recorded in Austria and other places, but the mortality in Liverpool fell below the average of the previous ten years.

HISTORY OF RECENT OUTBREAK.

The first indication in Liverpool of any unusual mortality from respiratory disease was the occurrence, in the first half of 1918, of an unusual number of cases of pneumonia with a high fatality, amongst coloured seamen in boarding houses in the south end of the City, as shown in the following table:—

Chart I. **Influenza and All Respiratory Diseases** **New York City, London and Paris — Epidemic Period of 1918 — 1919**



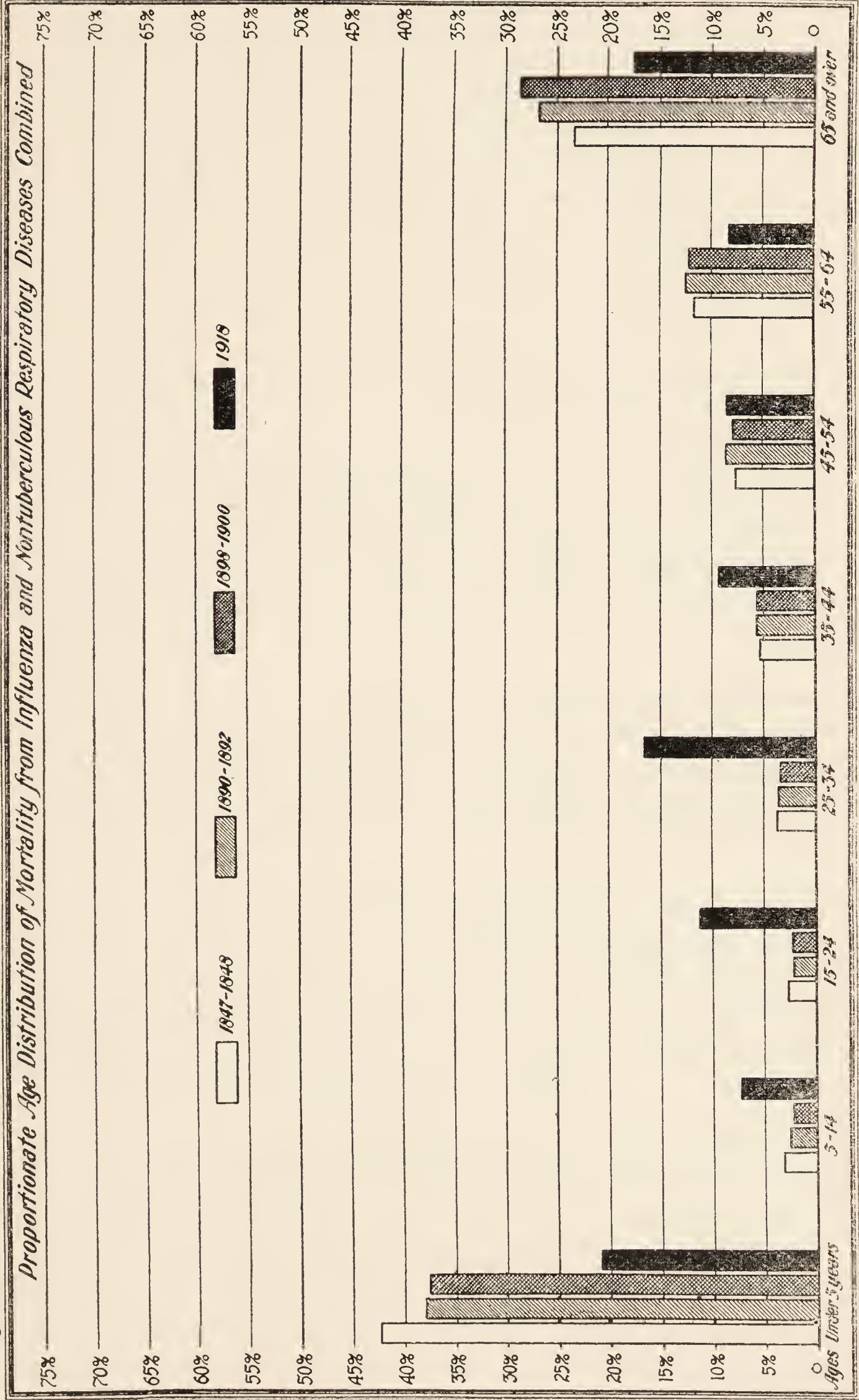
From the Statistician's Dept., The Prudential Insurance Company of America.



Chart II.

Influenza and All Respiratory Diseases

England and Wales — During the Epidemic Years 1847-1848, 1890-1892, 1898-1900 and 1918



From the Statistician's Dept., The Prudential Insurance Company of America



DEATHS OF COLOURED SEAMEN REGISTERED AS FROM PNEUMONIA.

| | | | | Cases. | | Deaths. |
|----------|-----|-----|-----|--------|-----|---------|
| January | ... | ... | ... | 14 | ... | 2 |
| February | ... | ... | ... | 3 | ... | 1 |
| March | ... | .. | ... | 11 | ... | 2 |
| April | ... | ... | ... | 35 | ... | 8 |
| May | ... | ... | ... | 11 | ... | 7 |
| June | ... | ... | ... | 7 | ... | 2 |

These deaths were not certified by the doctors in attendance as due to Influenza, but in the light of subsequent events it would seem probable that a proportion of them were occasioned by that disease. In this connection it is to be noted that it was in the south end of the City that outbreaks amongst school children first necessitated school closure in June.

During March some cases of Influenza were brought into the Port on a vessel from New York, and it is noteworthy that in April there were outbreaks of Influenza in centres as far apart as Virginia and California, showing how widespread the disease was in America at that time.

During May the first definite, though small, epidemic wave occurred in this City, a small number of deaths from Influenza being accompanied by a definite rise in the number of deaths ascribed to Pneumonia and Broncho-Pneumonia, and by a rise in the death rate from respiratory diseases generally and from all causes. This is shown in the accompanying Charts, Numbers III. and IV.

During this month fresh importations from ships occurred in considerable numbers. This wave coincided with an outbreak of the disease in Spain, where its nature was not at first recognised, and it was called the "Spanish Influenza," just as previous outbreaks have been known as the "Russian Influenza." Only one death occurred in June, but during July a second wave took place, a larger proportion of the deaths being recorded as from Influenza. The disease was now prevalent and recognised in many parts of Europe and North America.

During August and September the number of deaths again fell, but rose to a third maximum in the week ending October 26th, when there were recorded 204 deaths from Influenza and 170 deaths from Pneumonia and Broncho-Pneumonia. The respiratory death rate was 14.5 and the total death rate reached 41.8 during this week. Reference to Chart I. will show that this wave was occurring simultaneously in London, Paris and New York.

A third decline to a minimum took place in the week ending November 23rd, but the number of deaths continued very large, and a fourth rise to a maximum in the week ending February 22nd, when the respiratory death rate was 16.0 and the total death rate 42.5.

It will be observed that each succeeding wave was separated by a longer interval from the preceding one, but that it was also more severe. The interval between the first and second maxima was 9 weeks, that between the second and third was 14 weeks, and that between the third and fourth was 17 weeks.

MORTALITY.

The numbers of deaths from Influenza, Pneumonia and Bronchitis, and from all causes, are shown for each quarter of the year in Table I., where comparison is made with 1917. In Table II. the deaths are shown for each week in 1918 and the first half of 1919. The deaths certified from Influenza during 1918 were 1,388, making a rate of 1.77 per thousand of the total population.

It is impossible to give accurately the full total number of deaths caused by Influenza, as the name Influenza only figures in a proportion of the certificates relating to deaths in the cause of which Influenza was probably a factor. Comparing the numbers of deaths from respiratory diseases in 1917 and 1918, the excess in the latter year may fairly be attributed to Influenza.

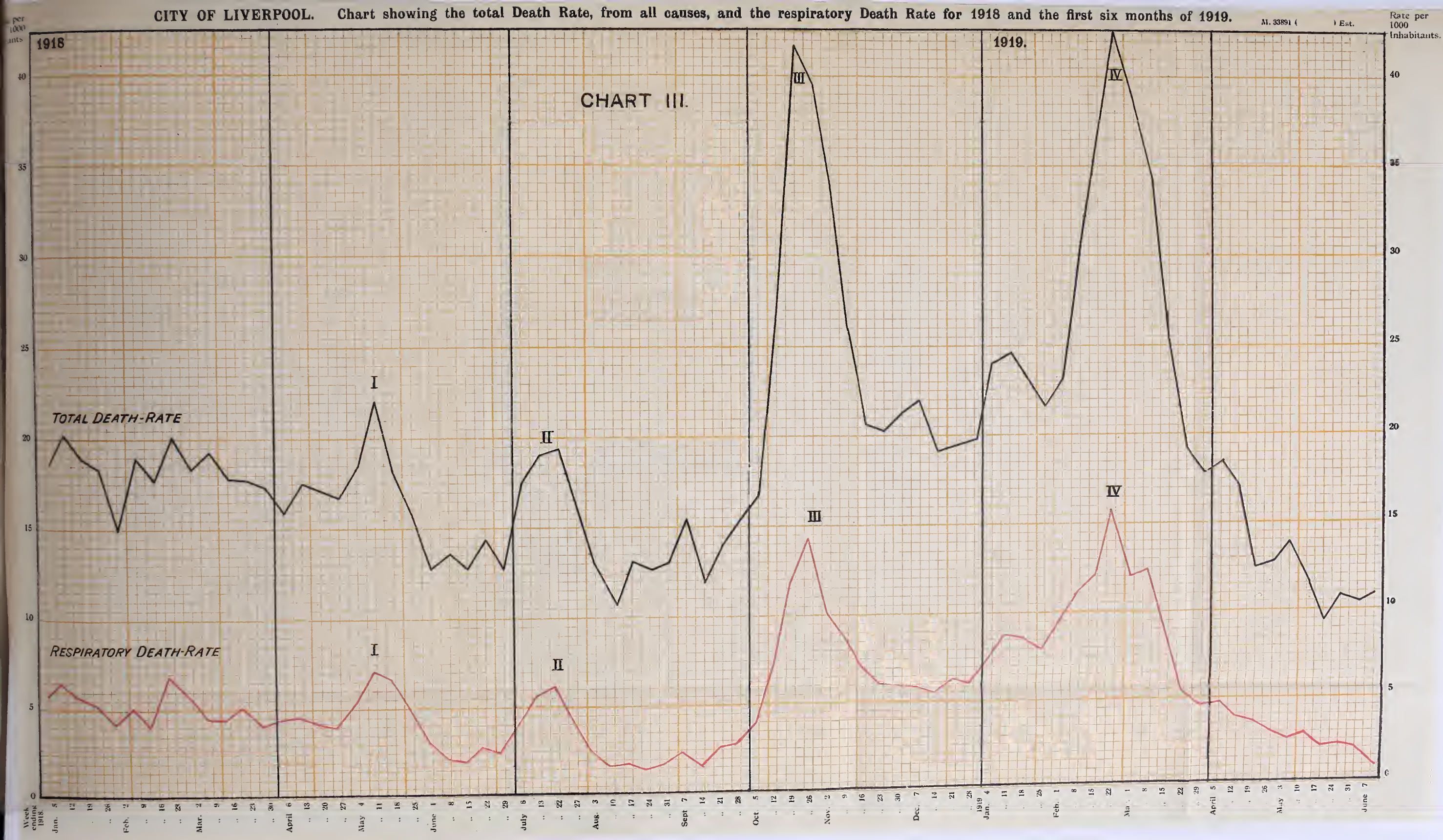
| | <u>1917.</u> | <u>1918.</u> | Excess or
deficiency over
1917. |
|-------------------------------------|--------------|--------------|---------------------------------------|
| Influenza | 55 | 1,388 | + 1,333 |
| Pneumonia and Broncho-Pneumonia ... | 1,530 | 2,605 | + 1,075 |
| Bronchitis | 1,445 | 1,413 | - 32 |
| Total | <u>3,030</u> | <u>5,406</u> | <u>+ 2,376</u> |

CITY OF LIVERPOOL. Chart showing the total Death Rate, from all causes, and the respiratory Death Rate for 1918 and the first six months of 1919.

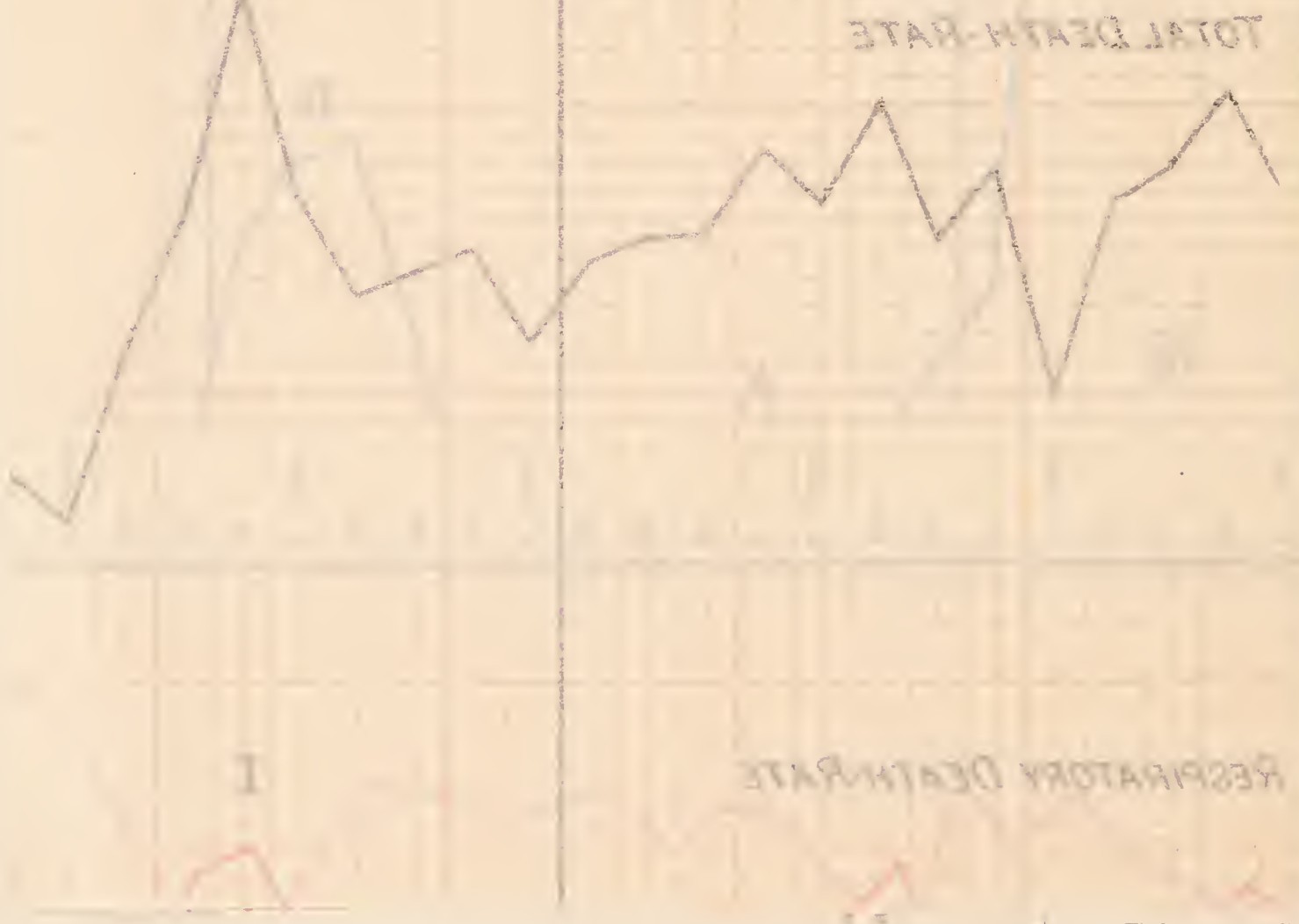
M. 33891 (

) Est.

Rate per
1000
Inhabitants.



1918

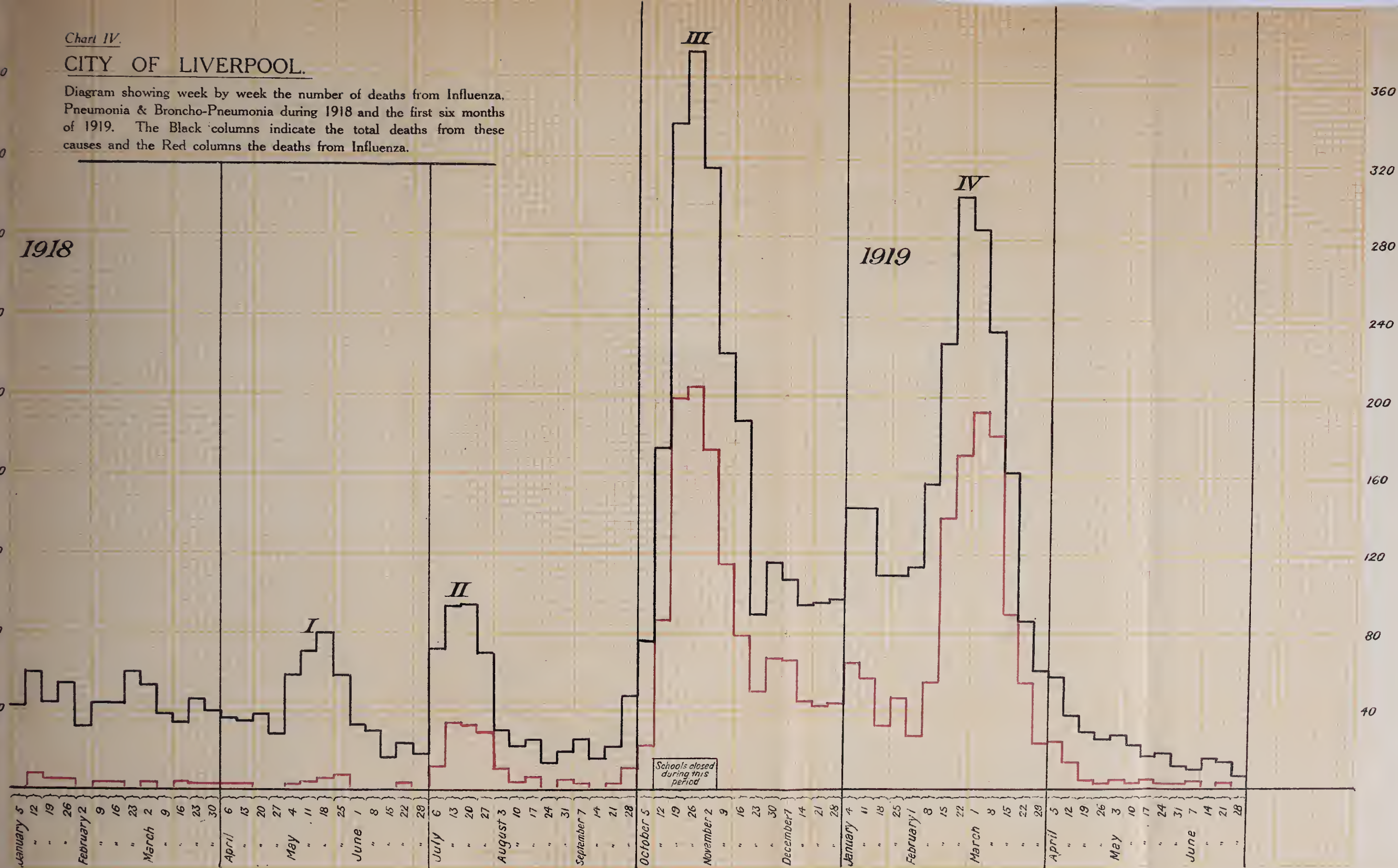


CITY OF LIVERPOOL.

Diagram showing week by week the number of deaths from Influenza, Pneumonia & Broncho-Pneumonia during 1918 and the first six months of 1919. The Black columns indicate the total deaths from these causes and the Red columns the deaths from Influenza.

1918

1919



CITY OF LIVERPOOL

This chart shows week by week the number of persons in the hospital during 1918 and 1919. The black columns indicate the total cases and the red columns the deaths from influenza.



This shows that 2,376 deaths were due to the Influenza outbreak, but even this high figure may not show the full effect since it is extremely probable that in very many instances sufferers from other forms of disease succumbed to an added attack of influenza too obscured and ill-defined to be regarded as the actual or primary cause of death.

A reference to Chart III., which shows the respiratory death rate, and that from all causes, suggests that the rise in the respiratory death rate does not by any means represent the full effect of the epidemic; the rise in the general death rate is due probably to many deaths having been hastened by Influenza.

EFFECTS UPON PREGNANT WOMEN.

A considerable number of pregnant women died from Influenza; such deaths occurring during the period October 12th to December 31st were very carefully investigated, and the following facts were elicited:

| | | |
|--|-----|----|
| Number of deaths during pregnancy (undelivered)... | ... | 31 |
| „ „ „ after abortion | ... | 18 |
| „ „ „ after confinement (child still-born) ... | ... | 14 |
| „ „ „ „ „ (child living, premature) | ... | 24 |
| „ „ „ „ „ (child living, full time) | ... | 8 |

From this table it would appear that during this period the death of the mother caused the death of the unborn infant in 63 instances, and of those children live-born 24 were premature.

In other cases the illness of the mother, though not fatal to herself, caused the infant to be still-born. A comparison of the births and still-births notified during the fourth quarter of the years 1917 and 1918, and the first quarters of the years 1918 and 1919, is given below.

Live Births and Still Births notified during the fourth quarters of 1917 and 1918 and the first quarters of 1918 and 1919:—

| | FOURTH QUARTERS. | | FIRST QUARTERS. | |
|--|------------------|--------------|-----------------|--------------|
| | <u>1917.</u> | <u>1918.</u> | <u>1918.</u> | <u>1919.</u> |
| Live Births | 3,836 | 3,877 | 3,850 | 3,757 |
| Still Births | 145 | 154 | 127 | 178 |
| Proportion per cent. of Still Births
to Live Births | 3·7 | 3·9 | 3·3 | 4·7 |

Taking the whole six months October to March, 1917 to 1918, and comparing it with the same period 1918 to 1919, it would appear that there was an increase in still-births of 60 during the latter period, causing a rise in the relative proportion of still to live births from 3·5 to 4·3 per cent.

AGE, SEX, AND RACE DISTRIBUTION.

The age and sex distribution of deaths from Influenza and from Broncho-Pneumonia and Pneumonia combined, for 1918 and the first half of 1919, are shown in the accompanying Tables III. and IV.

The Chart No. V. shows the deaths from Influenza alone during the last quarter of 1918 and the first quarter of 1919 divided into 15 age periods and with separate columns for the two sexes. From this it will be seen that the excess of female over male deaths from Influenza is almost entirely confined to the age periods between 15 and 40 years, i.e., was due to the absence of a portion of the male population on military service, and also possibly to the presence of large numbers of young women temporarily employed in munition factories, etc. The deaths from Pneumonia and Broncho-Pneumonia are almost equally divided between the two sexes.

From Chart No. V. it will also be seen that whilst a number of deaths from Influenza occurred amongst children under 5 years of age, the numbers decline rapidly in the next two age periods, and only a small number of deaths took place amongst children aged 10 to 15 years. The numbers of deaths again rise in adult life, and the greatest number of deaths occurred in the age period 20 to 30 years, after which the deaths decline roughly in proportion to the numbers of persons living in each successive age period. This is further shown in Table V., where comparison is made of the deaths during the last six months of 1917 and 1918 respectively. The death rate for Influenza, Pneumonia and Broncho-Pneumonia rose from 7·0 to 16·5 per 1,000 for the age period 0-5 years, i.e., the rate was rather more than doubled; but during the age periods 15-25 and 25-45 the rates rose from 0·3 to 5·2 and from 0·8 to 8·0 respectively, i.e., to 17 and 10 times the normal figures respectively.

Chart No. VI. shows the age distribution in 10 age periods of 203 fatal and 290 non-fatal cases occurring in the same series of 200 infected

CITY OF LIVERPOOL:



River water level in 1901. The following are the results of the investigation made with a view to ascertaining the cause of the low water level.

The following is a list of the causes of the low water level, and the results of the investigation made with a view to ascertaining the cause of the low water level.



houses. Chart II. is of interest as showing the variations in the age distribution of deaths from Influenza in England and Wales in this and three previous epidemics.

Both negroes and natives of India temporarily in Liverpool suffered severely from the disease.

MEANS OF INTRODUCTION.

The gradual rise in the number of deaths from Influenza during 1914, 1915, and 1916 shows that the disease was present in this country, as elsewhere, and was becoming of steadily increasing severity. There is a good deal to show that the disease was re-introduced into Liverpool in a severe form early in the year; the early occurrence of cases of Influenza on board ship and of Pneumonia amongst coloured seamen referred to on p. 12, is noteworthy.

Subsequently very large numbers of cases occurred on transports bringing American and other troops. Whilst the soldiers themselves were removed to military hospitals when acutely ill, there can be little doubt that convalescent cases, though possibly still infectious, mingled with the general population. Moreover, the crews of these transports and other vessels were almost equally affected, and with the great pressure on the hospitals of the City and the use of two of the largest fever hospitals for military purposes, the utmost difficulty was experienced in obtaining hospital accommodation, even for those severely ill. This undoubtedly led to repeated re-introductions of the infection.

Soldiers and sailors returning home on leave were also to some extent responsible for importation of the disease, as is shown in the following section.

METHOD OF SPREAD.

There can be no doubt that the disease is spread to those in the near vicinity of a person suffering from the disease by the act of coughing, sneezing, etc. In crowded and ill-ventilated rooms the numbers infected by one such person may be considerable. This is exemplified by the rapid spread on board transports and in certain factories, offices, etc. The patient is most infective at the onset of the disease.

Visits to persons ill with the disease, and the transfer of sick persons from one house to another are practices that are fraught with great danger of the dissemination of infection.

These points were illustrated in an enquiry that was made in November into some 203 consecutive deaths in 200 different houses. Besides the fatal cases there were 301 other cases, of which 180 were previous and 121 were subsequent to the fatal cases. In all, out of a total population in these houses of 1,156 persons, 504 had been infected at the time of visit. In a number of houses all the inhabitants had been infected, but in others a considerable proportion had escaped. In some houses the infection had been re-introduced on several occasions, and some members who had escaped the earlier introduction succumbed to the later ones. Of the 200 persons who introduced the infection into the houses 164, or 82 per cent., were 14 years of age or over. It was the adults principally who carried the infection into fresh houses.

The probable source of infection amongst the 203 fatal cases inquired into on those lines is shown in the following table:—

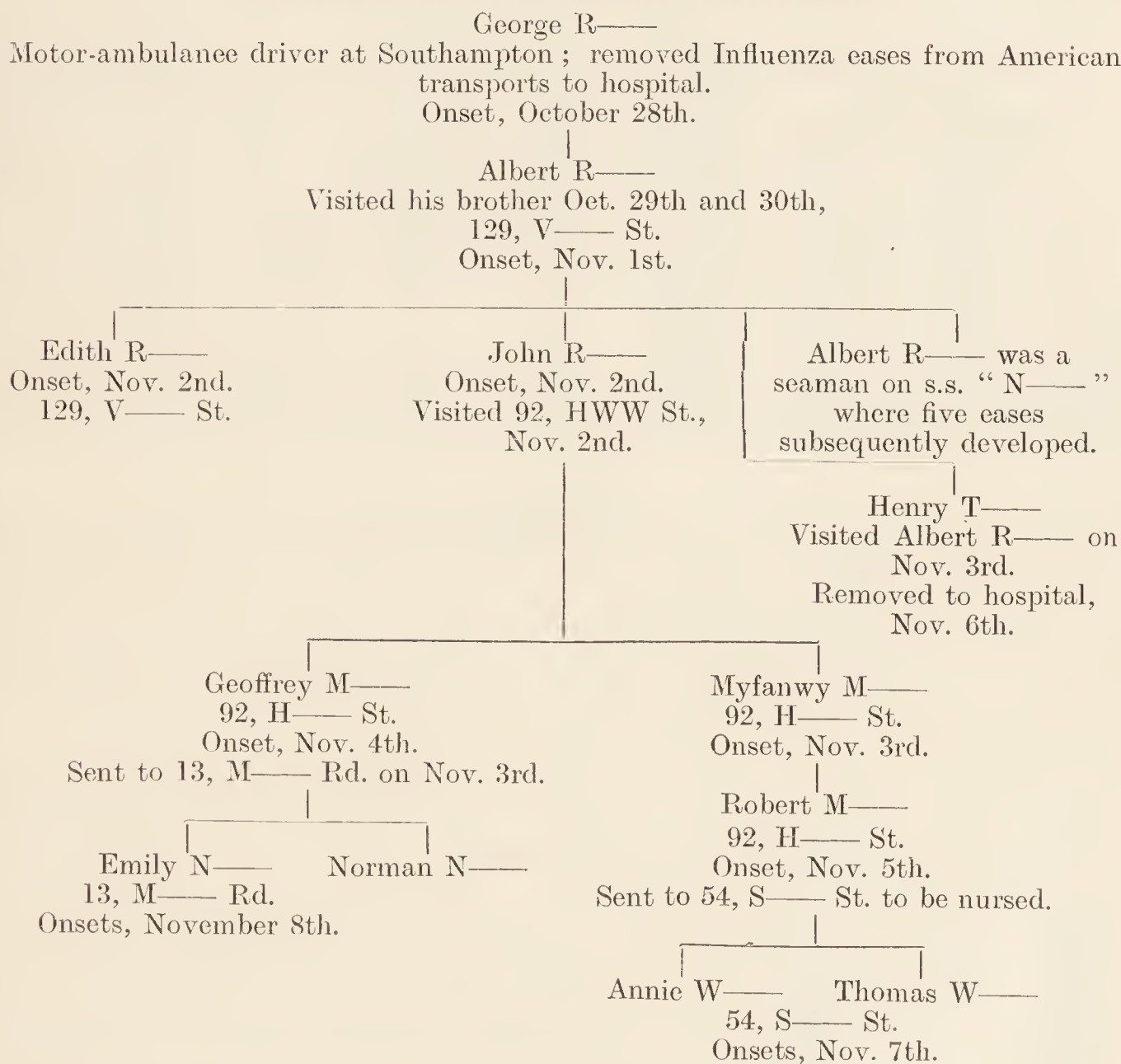
| | Cases. | Proportion % |
|---|--------|-------------------|
| Infected from previous case in house ... | 75 | 37·5 |
| Visited, or visited by, other cases ... | 19 | 9·5 |
| Other cases in works, factories, etc., where patient worked ... | 16 | 8·0 |
| Worked in shops, cafés, etc. ... | 11 | 5·5 |
| Worked on transports, etc., carrying troops amongst whom cases had occurred ... | 3 | 1·5 |
| Returned home ill from ships on which cases had occurred ... | 2 | 1·0 |
| | | <hr/> 63·5% <hr/> |

Amongst the 75 fatal cases reported as infected from a previous case the first case in the house was infected thus:—

| | Cases. | Proportion % |
|--|--------|-------------------|
| From other cases in works, factories, etc. ... | 10 | 13·5 |
| By visiting, or being visited by, other cases... | 5 | 6·7 |
| Returned home from sea, other cases in ship | 4 | 5·4 |
| Infected by soldiers home on leave ... | 3 | 4·5 |
| | | <hr/> 30·1% <hr/> |

Several of the above cases returned home ill from sea, either arriving in Liverpool or coming by rail from other ports. Others were engaged on transports carrying American troops. One instance is given in the attached diagram of a motor-driver engaged at Southampton in removing to hospital American soldiers ill with Influenza. He fell ill and was visited on October 29th and 30th by his brother, who returned to Liverpool on November 1st and fell ill the same day; 16 other cases were traced in Liverpool to infection from this source, as follows:—

SEQUENCE OF 18 CASES OF INFLUENZA.



INCUBATION PERIOD AND DURATION OF INFECTIVITY.

The above table illustrates the very brief incubation period, which appears to be about two days, and sometimes less. It is also apparent that the cases are most infectious during the first few days of the disease.

SECOND ATTACKS.

Amongst the 504 cases reported on above, 19 were stated to have had second attacks. The term Influenza is used rather loosely, and might well cover other diseases, so that no great reliance can be placed on these statements.

CLINICAL FEATURES.

As in other epidemics of Influenza the onset was usually sudden, with headache and general pains. In the summer, catarrhal symptoms were often slight, but were much more pronounced in winter.

In cases uncomplicated by Pneumonia, the onset with epistaxis was frequent. Another striking symptom was the occurrence of cyanosis. In cases with Pneumonia the great sleeplessness, the failure to react, and the frequent presence of Jaundice and Pulmonary Oedema were prominent features. It is notable that similar cases of Pneumonia were not uncommon in 1916 and 1917.

A symptom that has been noticed previously was the occasional occurrence of persistent pains in the feet during convalescence.

FATALITY.

No exact estimate of the proportion of deaths to cases is possible. In certain small outbreaks a fatality rate of 5 per cent. was observed; but in two households, 4 deaths (3 adults and 1 child) amongst 10 persons, and 4 deaths (all children) amongst 9 persons, were recorded. In the latter case the Pneumococcus was the organism found. On one vessel with a Lascar crew, 72 cases of Influenza occurred, of which 37 were fatal. In this instance the occurrence of a fire on board the ship just before the outbreak of Influenza amongst the crews subjected them to the irritative effect of smoke and increased the severity of the cases. The fatality rate was undoubtedly higher in the winter than in the summer. In one factory some 1,200 cases occurred in July, and an equal number in October, twice the number of deaths occurring in the latter month.

BACTERIOLOGICAL EXAMINATIONS.

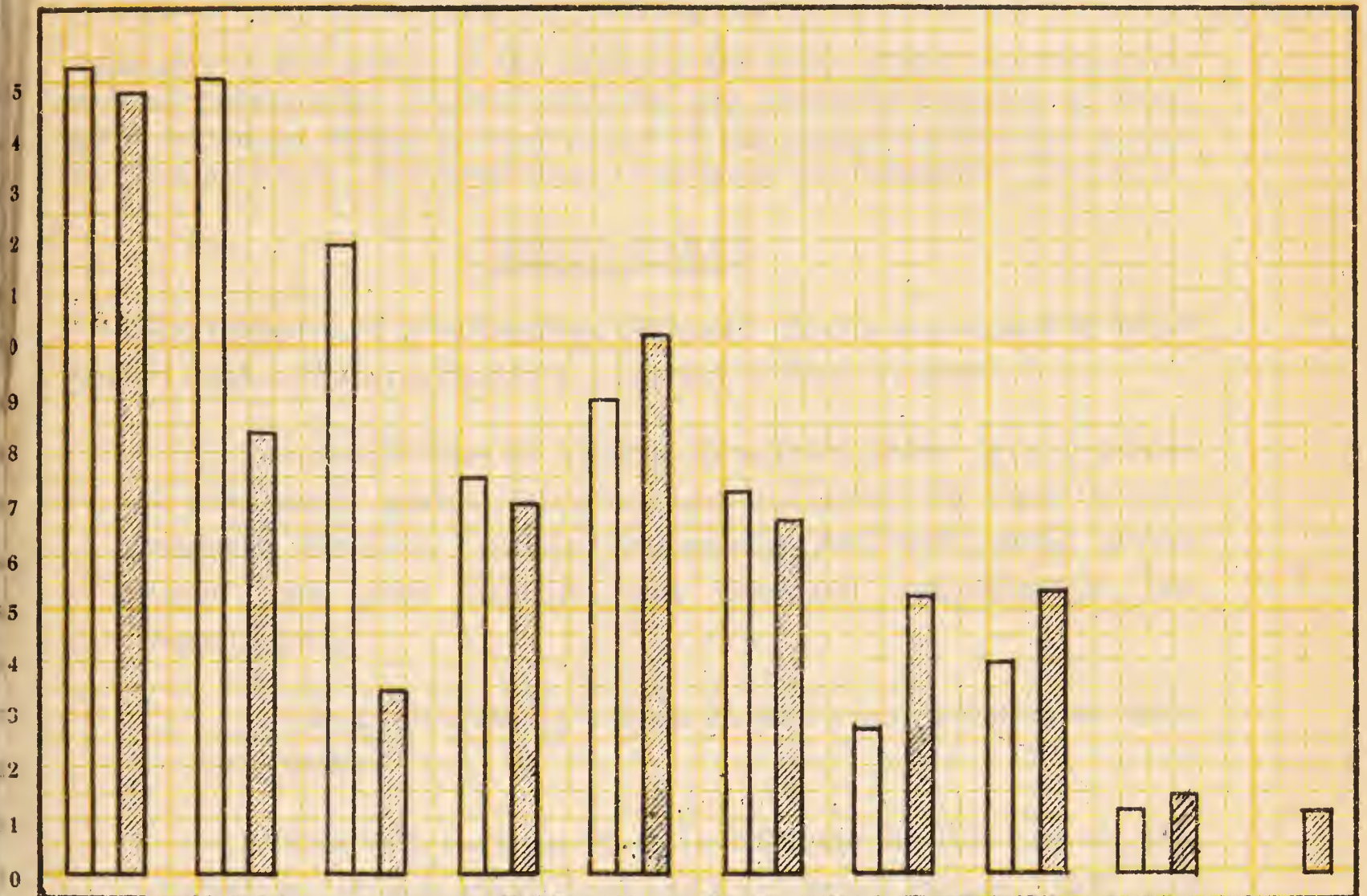
The Pneumococcus was the organism most commonly found in Liverpool. Streptococci were also reported; Pfeiffer's bacillus was but rarely found. There is some evidence to show that none of these

CITY OF LIVERPOOL.

CHART VI.

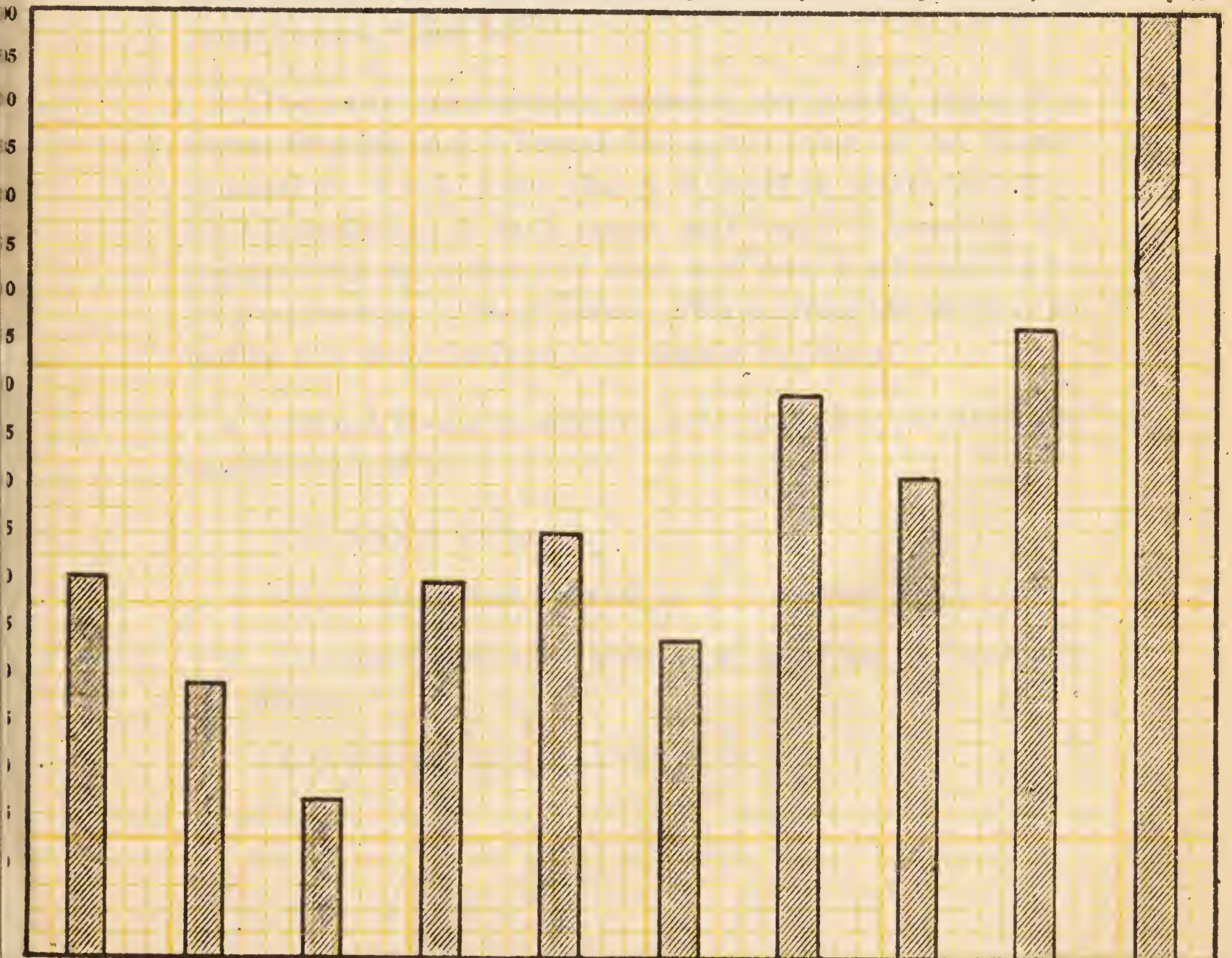
203 fatal and 290 non-fatal cases of Influenza occurring in the same houses. The fatal cases (shown black) and the non-fatal cases (shown white) are distributed into columns indicating the percentage proportions at each of 10 age periods of all fatal and all non-fatal cases respectively.

0-5 yrs. 5-10 yrs. 10-15 yrs. 15-20 yrs. 20-30 yrs. 30-40 yrs. 40-50 yrs. 50-60 yrs. 60-70 yrs. Over 70 yrs.

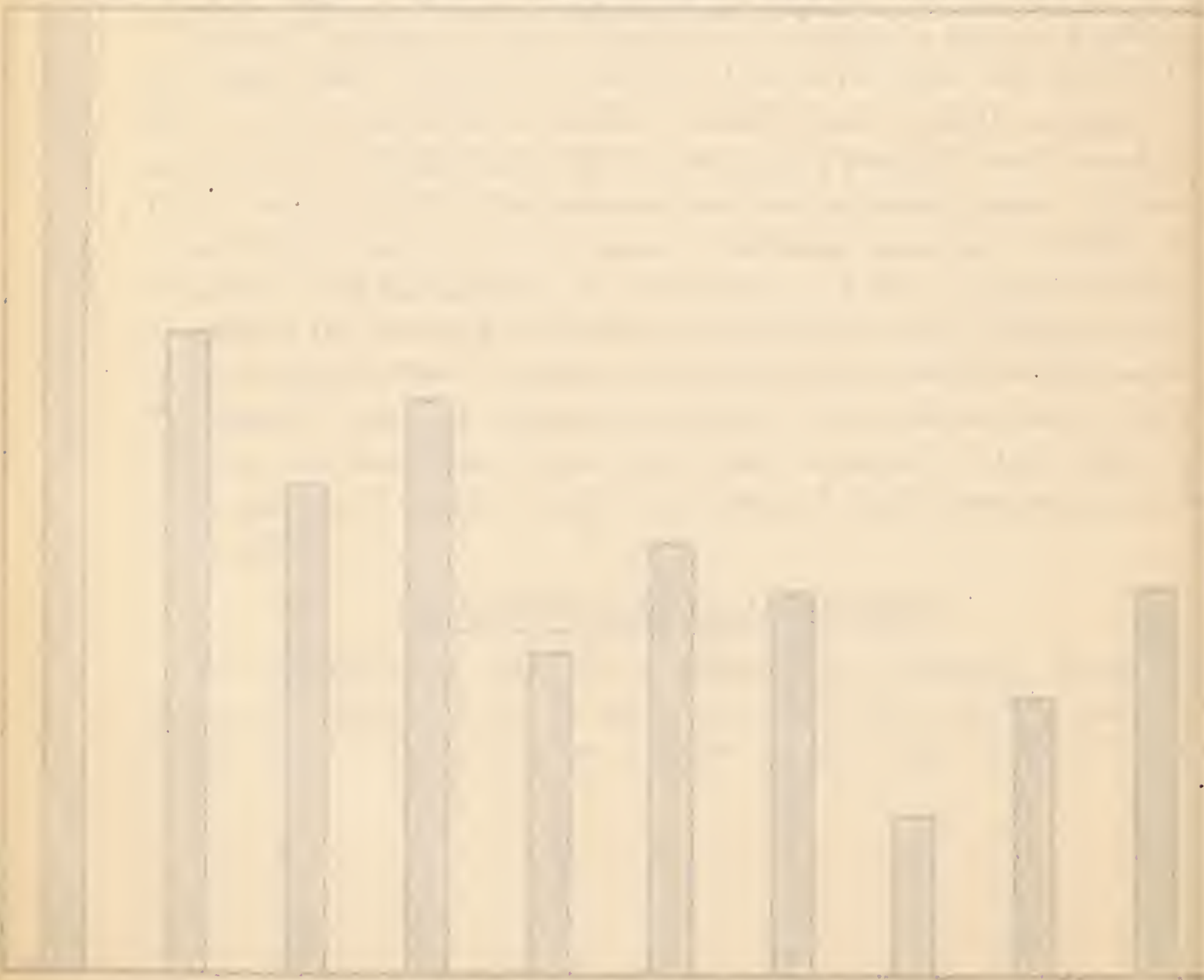


The same cases showing the proportion per cent. of fatal cases to all cases at each age period.

0-5 yrs. 5-10 yrs. 10-15 yrs. 15-20 yrs. 20-30 yrs. 30-40 yrs. 40-50 yrs. 50-60 yrs. 60-70 yrs. Over 70 yrs.



THE following table shows the number of persons employed in the various trades and occupations in the City of Liverpool, as ascertained by the Census of 1851. The total number of persons employed in the various trades and occupations in the City of Liverpool, as ascertained by the Census of 1851, was 100,000.



organisms is the cause of the disease, but only of the complications, such as pneumonia. In that case the use of mixed vaccines of these three organisms might be preventive of the complications, but not of the disease itself. No general use was made of vaccines in Liverpool.

ACTION TAKEN.

In the presence of a widespread outbreak, the measures had to be of general rather than particular application. They consisted in—

(a) The distribution of leaflets, as printed below, giving advice on precautions against infection, and instruction on what to do if infection occurred. Similar communications were made to the Press, who gave valuable and unstinted assistance to the Department:—

1. The golden rule is to keep fit, and avoid infection as much as possible.

2. The way to keep fit is to cultivate healthy and regular habits, to eat good food, and to avoid fatigue, chill and alcoholism. Healthy living does not of itself ensure against attack, but it makes the patient better able to withstand the complications which kill.

3. The early symptoms of influenza are usually those of a severe feverish cold. Though the actual cause of the disease is unknown, we do know that it is rapid in onset, that it is most infectious in its early stages, and that it is spread by discharges from the mouth and nose, and that it kills mainly by its complications. Every person suffering from the disease, no matter how mild the form, is a danger to others.

4. It is not always possible to avoid infection, but the risks can be lessened by—

- (a) healthy living;

- (b) working and sleeping in well-ventilated rooms;

- (c) avoiding crowded gatherings and close, ill-ventilated rooms;

- (d) wearing warm clothing;

(*e*) gargling the throat and washing out the nostrils;*

(*f*) by wearing a †mask and glasses when nursing or in attendance on a person suffering from influenza.

5. Do not waste money on drugs in the false hope of preventing infection.

6. Avoid all gatherings of people in closed Halls, Rooms, Theatres, and so forth. The risk of infection is greater in enclosed places than in the open air.

7. Those attacked, even slightly, should on no account join assemblages of people for at least ten days after the commencement of their illness.

8. Those attacked should—

(*a*) go home, go to bed, and keep warm;

(*b*) call in a doctor;

(*c*) occupy, if possible, a separate bedroom or a bed that is screened off from the rest of the room;

(*d*) when coughing or sneezing hold a handkerchief in front of the mouth; the handkerchief should be boiled, or burnt if of paper;

(*e*) use a gargle as described;

(*f*) be careful during convalescence in order to avoid relapse or complications;

(*g*) avoid meetings and places of entertainment for at least one week after the temperature has become normal.

The foregoing is approved by the Local Government Board and by the Health Committee of the City.

(*b*) Closure of Schools.—From June 27th outbreaks of influenza, especially in the South End of the City, necessitated the closure of certain schools, and fifteen were closed before the end of the

* The following may be used as a gargle:—A solution of common salt (one teaspoonful to a pint of warm water) to which a few crystals of potassium permanganate are added—enough to make the solution pink.

† The mask, which may be made of gauze (4 layers) or butter muslin (3 layers) should cover the mouth and nose. To protect the eyes it is advisable to wear goggles.

term. All Elementary Schools and Sunday Schools were closed from October 4th to November 4th. This was accompanied by the closure of special performances for children in kinemas. In many kinemas children were altogether excluded.

On October 26th, as the result of communications from the Health Committee, the Licensing Magistrates imposed further restrictions on kinemas and music-halls, by which an interval of three-quarters of an hour or more was allowed between performances for ventilation. In November, an Order of the Local Government Board was issued giving power to close kinemas to children in the vicinity of schools that were closed on account of influenza.

The restrictions to the admission of children to kinemas were removed on December 2nd.

(c) A certain number of cases were removed to the City Fever Hospitals. The City Fever Ambulances were also rendered available for the transport of cases of influenza to the various Hospitals and Institutions in the City; 336 cases were so removed. As the result of continued correspondence, the City Hospital, Sparrow Hall, which is in Military use, was eventually rendered available for the crews of transports and other vessels engaged in Government work.

(d) Provision of Home Nursing.—On November 4th, as it became apparent that the Queen Victoria District Nurses were unable to cope with the home nursing of the large numbers of cases of pneumonia, the nurses on the City staff usually engaged in visiting measles cases, were employed also in visiting and nursing cases of pneumonia. 509 cases of pneumonia were visited up to the end of 1918, and 2,032 during the first six months of 1919.

(e) Systematic disinfection of trams, railway carriages and waiting rooms, and free ventilation of such places was encouraged. Much valuable assistance was rendered by the various bodies concerned.

INFLUENZA, PNEUMONIA & BRONCHITIS.

The following table shows the number of deaths from Influenza, Pneumonia, Bronchitis and All Causes during each quarter of the year 1918, corrected to include the deaths of Liverpool residents which occurred outside the City, also the total death rate per 1,000 of the estimated population from all causes, together with the numbers from all causes and the rate per 1,000 during the corresponding periods of the year 1917. The number of deaths of Males and Females are shown separately.

Table I.

| Year 1918.
Quarter ending | No. of Deaths from | | | 1918.
Deaths
from
all
Causes. | 1918.
Rate
per
1,000
of
Popula-
tion. | 1917.
Deaths
from
all
Causes. | 1917.
Rate
per
1,000
of
Popula-
tion. |
|------------------------------|--------------------|-----------------|------------------|---|---|---|---|
| | In-
fluenza. | Pneu-
monia. | Bron-
chitis. | | | | |
| MARCH 30th | 26 | 587 | 461 | 3,787 | 19·3 | 4,137 | 21·1 |
| JUNE 29th | 18 | 527 | 307 | 3,301 | 16·9 | 3,390 | 17·3 |
| SEPT. 28th | 139 | 414 | 193 | 3,042 | 15·5 | 2,542 | 13·0 |
| DEC. 28th | 1,205 | 1,077 | 452 | 5,137 | 26·3 | 3,024 | 15·4 |
| TOTAL | 1,388 | 2,605 | 1,413 | 15,267 | 19·5 | 13,093 | 16·7 |
| MALES | 583 | 1,397 | 733 | 7,833 | — | 7,066 | — |
| FEMALES | 805 | 1,208 | 680 | 7,434 | — | 6,027 | — |
| Year 1917. | | | | | | | |
| MALES | 34 | 911 | 730 | — | — | — | — |
| FEMALES | 21 | 619 | 715 | — | — | — | — |
| TOTAL | 55 | 1,530 | 1,445 | — | — | — | — |

Table II.

Table showing week by week the total number of deaths from all causes, the death-rate, and the number of deaths from Influenza, Pneumonia, and Bronchitis.

These figures do not include the deaths of Liverpool residents which occurred outside the City.

| 1918.
Week ending | | Total
Deaths. | Weekly
Death rate
per 1,000 of
Estimated
Population. | No. of Deaths from | | |
|----------------------|----------|------------------|--|--------------------|---|-------------|
| | | | | Influenza. | Pneumonia
and
Broncho
Pneumonia. | Bronchitis. |
| JANUARY | 5 | 278 | 18.5 | — | 41 | 44 |
| | 12 | 303 | 20.1 | 7 | 53 | 49 |
| | 19 | 284 | 18.9 | 4 | 40 | 45 |
| | 26 | 273 | 18.1 | 4 | 51 | 28 |
| FEBRUARY | 2 | 225 | 14.9 | — | 32 | 29 |
| | 9 | 285 | 18.9 | 2 | 43 | 34 |
| | 16 | 267 | 17.7 | 2 | 43 | 30 |
| | 23 | 302 | 20.1 | — | 60 | 43 |
| MARCH | 2 | 275 | 18.3 | 2 | 51 | 36 |
| | 9 | 289 | 19.2 | — | 39 | 32 |
| | 16 | 269 | 17.9 | 2 | 35 | 31 |
| | 23 | 266 | 17.6 | 1 | 45 | 35 |
| | 30 | 255 | 16.9 | 1 | 39 | 23 |
| | | 3,571 | 18.3 | 25 | 572 | 459 |
| APRIL | 6 | 240 | 15.9 | 1 | 36 | 26 |
| | 13 | 260 | 17.3 | 1 | 35 | 31 |
| | 20 | 253 | 16.8 | — | 39 | 27 |
| | 27 | 250 | 16.6 | — | 28 | 34 |
| MAY | 4 | 276 | 18.3 | 2 | 57 | 25 |
| | 11 | 333 | 22.1 | 3 | 68 | 38 |
| | 18 | 275 | 18.3 | 4 | 76 | 26 |
| | 25 | 233 | 15.5 | 6 | 53 | 23 |
| JUNE | 1 | 192 | 12.8 | — | 33 | 14 |
| | 8 | 203 | 13.5 | — | 30 | 7 |
| | 15 | 193 | 12.8 | — | 16 | 13 |
| | 22 | 213 | 14.2 | 1 | 23 | 22 |
| | 29 | 192 | 12.8 | — | 19 | 16 |
| | | 3,113 | 15.9 | 18 | 513 | 302 |
| JULY | 6 | 264 | 17.5 | 11 | 45 | 15 |
| | 13 | 286 | 19.0 | 33 | 61 | 19 |
| | 20 | 289 | 19.2 | 32 | 63 | 28 |
| | 27 | 248 | 16.4 | 28 | 41 | 23 |
| AUGUST | 3 | 191 | 12.7 | 8 | 23 | 15 |
| | 10 | 164 | 10.9 | 3 | 16 | 8 |
| | 17 | 198 | 13.2 | 4 | 18 | 12 |
| | 24 | 190 | 12.6 | — | 14 | 10 |
| SEPTEMBER | 31 | 194 | 12.9 | 4 | 16 | 13 |
| | 7 | 230 | 15.3 | 1 | 25 | 13 |
| | 14 | 175 | 11.6 | — | 16 | 10 |
| | 21 | 207 | 13.8 | 1 | 22 | 18 |
| | 28 | 232 | 15.4 | 10 | 39 | 7 |
| | | 2,868 | 14.7 | 135 | 399 | 191 |

| 1918.
Week ending | | Total
Deaths. | Weekly
Death rate
per 1,000 of
Estimated
Population. | No. of Deaths from | | |
|----------------------------------|----------|------------------|--|--------------------|---|-------------|
| | | | | Influenza. | Pneumonia
and
Broncho
Pneumonia. | Bronchitis. |
| OCTOBER | 5 | 252 | 16·6 | 22 | 55 | 19 |
| | 12 | 394 | 26·2 | 85 | 89 | 23 |
| | 19 | 626 | 41·6 | 198 | 140 | 42 |
| | 26 | 591 | 39·3 | 204 | 170 | 46 |
| NOVEMBER | 2 | 507 | 33·7 | 166 | 110 | 39 |
| | 9 | 383 | 25·6 | 113 | 109 | 22 |
| | 16 | 311 | 20·6 | 78 | 66 | 39 |
| | 23 | 308 | 20·4 | 45 | 63 | 31 |
| DECEMBER | 30 | 320 | 21·3 | 62 | 55 | 35 |
| | 7 | 330 | 21·9 | 61 | 46 | 43 |
| | 14 | 285 | 18·9 | 43 | 52 | 31 |
| | 21 | 294 | 19·5 | 41 | 55 | 41 |
| | 28 | 298 | 19·8 | 43 | 55 | 38 |
| | | 4,899 | 25·1 | 1,161 | 1,065 | 449 |
| Total for the Year
1918..... | | 14,451 | 18·5 | 1,339 | 2,549 | 1,401 |
| 1919 | | | | | | |
| JANUARY | 4 | 361 | 24·0 | 63 | 77 | 38 |
| | 11 | 371 | 24·7 | 56 | 84 | 52 |
| | 18 | 348 | 23·1 | 31 | 78 | 49 |
| | 25 | 323 | 21·6 | 35 | 74 | 54 |
| FEBRUARY | 1 | 347 | 23·1 | 27 | 87 | 52 |
| | 8 | 457 | 30·5 | 55 | 102 | 59 |
| | 15 | 555 | 37·0 | 139 | 90 | 88 |
| | 22 | 638 | 42·5 | 169 | 134 | 98 |
| MARCH | 1 | 584 | 38·9 | 182 | 103 | 75 |
| | 8 | 510 | 34·0 | 140 | 94 | 95 |
| | 15 | 377 | 25·1 | 84 | 78 | 56 |
| | 22 | 292 | 19·4 | 54 | 32 | 53 |
| | 29 | 268 | 17·8 | 24 | 37 | 32 |
| | | 5,431 | 27·8 | 1,059 | 1,070 | 801 |
| APRIL | 5 | 278 | 18·5 | 24 | 33 | 39 |
| | 12 | 256 | 17·1 | 13 | 26 | 37 |
| | 19 | 221 | 14·7 | 4 | 26 | 27 |
| | 26 | 186 | 12·4 | 2 | 24 | 25 |
| MAY | 3 | 190 | 12·7 | 4 | 22 | 21 |
| | 10 | 205 | 13·7 | 2 | 21 | 24 |
| | 17 | 176 | 11·7 | 4 | 13 | 23 |
| | 24 | 139 | 9·2 | 2 | 16 | 19 |
| JUNE | 31 | 161 | 10·7 | 2 | 10 | 20 |
| | 7 | 158 | 10·5 | 3 | 8 | 9 |
| | 14 | 163 | 10·9 | — | 16 | 20 |
| | 21 | 123 | 8·2 | 1 | 13 | 7 |
| | 28 | 119 | 7·9 | — | 7 | 12 |
| | | 2,375 | 12·1 | 61 | 235 | 283 |
| Total for the Half
Year | | 7,806 | 20·0 | 1,120 | 1,305 | 1,084 |

Table IV.

Table showing the deaths from **Pneumonia and Broncho-Pneumonia** during the four quarters of the year 1918 and the two first quarters of 1919, together with the age and sex distribution, corrected to include deaths of residents occurring outside City.

| | AGES. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total. | | | | | |
|----------------------------------|-------|-----|-----|-----|----|-----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|-----|-----|----|----|-----|----|-----|----|----|----|----|----|--------|----|----|----|----------|------|
| | 1 | | 2 | | 3 | | 4 | | 5 | | 10 | | 15 | | 20 | | 25 | | 30 | | 40 | | 45 | | 50. | | 60 | | 65 | | 70 | | | | 80 | | Above 80 | |
| | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | M. | F. | | |
| 1918. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1st Quarter | 99 | 59 | 63 | 55 | 21 | 28 | 11 | 7 | 6 | 2 | 7 | 14 | 4 | 8 | 2 | 5 | 4 | 6 | 10 | 5 | 13 | 19 | 15 | 4 | 17 | 5 | 26 | 14 | 12 | 6 | 9 | 10 | 9 | 8 | — | 4 | 328 | 259 |
| 2nd Quarter ... | 29 | 29 | 40 | 36 | 12 | 15 | 8 | 9 | 5 | 4 | 23 | 17 | 7 | 6 | 4 | 3 | 16 | 9 | 12 | 10 | 24 | 13 | 25 | 10 | 21 | 7 | 53 | 11 | 11 | 5 | 14 | 2 | 19 | 13 | — | 5 | 323 | 204 |
| 3rd Quarter | 24 | 9 | 21 | 15 | 11 | 13 | 7 | 3 | 4 | 4 | 16 | 19 | 10 | 7 | 8 | 10 | 11 | 21 | 13 | 14 | 20 | 20 | 22 | 7 | 17 | 4 | 22 | 14 | 17 | 6 | 11 | 5 | 2 | 5 | 1 | 1 | 237 | 177 |
| 4th Quarter | 62 | 45 | 57 | 62 | 35 | 48 | 17 | 30 | 17 | 26 | 32 | 52 | 14 | 23 | 27 | 32 | 25 | 24 | 44 | 50 | 73 | 60 | 24 | 19 | 19 | 24 | 25 | 32 | 11 | 9 | 14 | 11 | 13 | 17 | — | 4 | 509 | 568 |
| Total for 1918 ... | 214 | 142 | 181 | 168 | 79 | 104 | 43 | 49 | 32 | 36 | 78 | 102 | 35 | 44 | 41 | 50 | 56 | 60 | 79 | 79 | 130 | 112 | 86 | 40 | 74 | 40 | 126 | 71 | 51 | 26 | 48 | 28 | 43 | 43 | 1 | 14 | 1397 | 1208 |
| 1919. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1st Quarter | 149 | 92 | 77 | 78 | 46 | 45 | 22 | 29 | 22 | 26 | 22 | 42 | 8 | 14 | 14 | 10 | 15 | 16 | 27 | 22 | 30 | 32 | 16 | 14 | 18 | 18 | 46 | 42 | 15 | 19 | 18 | 7 | 8 | 19 | 3 | 7 | 555 | 532 |
| 2nd Quarter ... | 25 | 16 | 17 | 11 | 5 | 4 | 5 | 3 | 1 | 1 | 5 | 4 | 4 | 3 | 1 | 3 | 11 | 2 | 11 | 2 | 13 | 15 | 5 | 1 | 9 | 5 | 17 | 5 | 10 | 5 | 4 | 3 | 5 | 7 | 2 | 1 | 151 | 91 |
| Total for first half of 1919 ... | 174 | 108 | 94 | 89 | 51 | 49 | 27 | 32 | 23 | 27 | 27 | 46 | 12 | 17 | 15 | 13 | 26 | 18 | 38 | 24 | 43 | 47 | 21 | 15 | 27 | 23 | 63 | 47 | 25 | 24 | 22 | 10 | 13 | 26 | 5 | 8 | 706 | 623 |

Table V.

INFLUENZA, PNEUMONIA & BRONCHITIS.

Table showing the number of deaths from Influenza, Pneumonia, and Bronchitis at different age periods during the last half of the year **1918**, the rate per 1,000 of the population from the diseases mentioned at these age periods when Influenza was prevalent, and a comparison with the same period for 1917.

| Age Periods. | Influenza. | Pneumonia. | Bronchitis. | 1918.
Total Deaths.
from these
Diseases. | 1918.
Rate per
1,000 per
annum of the
Population
at Specified
Ages. | 1917.
Total Deaths
from these
Diseases. | 1917.
Rate per
1,000 per
annum of the
Population
at Specified
Ages. |
|----------------|------------|------------|-------------|---|---|--|---|
| 0 to 5 | 192 | 510 | 82 | 784 | 16.5 | 334 | 7.0 |
| 5 to 15 | 147 | 173 | 9 | 329 | 4.0 | 64 | 0.8 |
| 15 to 25 | 194 | 158 | 10 | 362 | 5.2 | 22 | 0.3 |
| 25 to 45 | 513 | 366 | 55 | 934 | 8.0 | 87 | 0.8 |
| 45 to 65 | 227 | 200 | 230 | 657 | 11.1 | 221 | 3.7 |
| Over 65 | 71 | 84 | 259 | 414 | 23.4 | 229 | 12.9 |
| Total | 1,344 | 1,491 | 645 | 3,480 | 8.9 | 957 | 2.4 |

MEASLES AND GERMAN MEASLES.

Statistics for Year 1918.

The number of cases dealt with during the year under the Public Health (Measles and German Measles) Regulations, 1915, was 9,263, a number slightly above that of the previous year, which was 9,230. Practically two-thirds of the cases occurred during the months of March, April, May and June. The number of cases removed to hospital was 843. The following statement shows the means by which the cases came under the notice of the Medical Officer of Health, the number of households in which one or more cases occurred, &c.:—

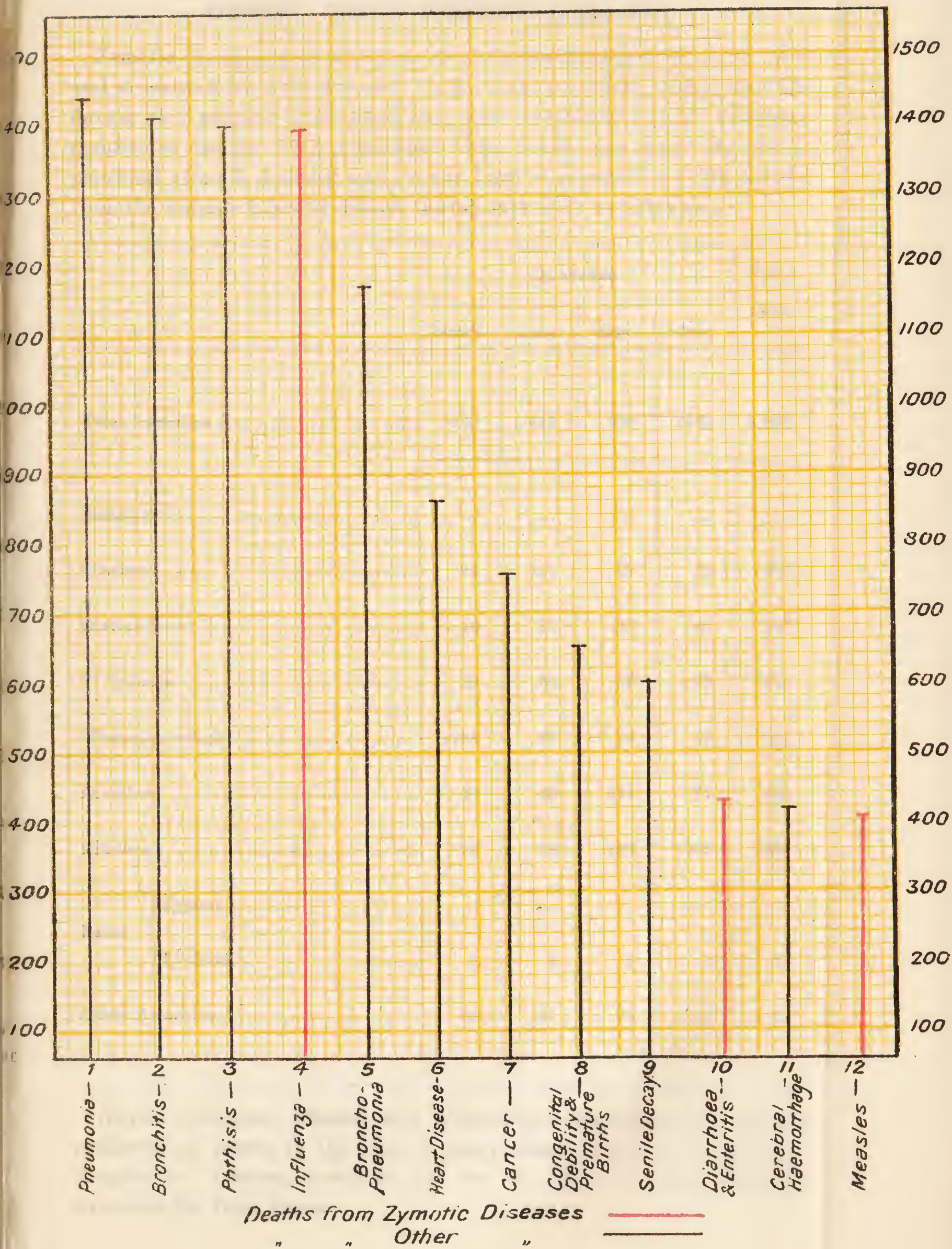
| | | | | |
|---------------------------------------|-----|-----|-----|-------|
| (a) Total cases notified | ... | ... | ... | 9,268 |
| (b) Notified by Medical Practitioners | ... | ... | ... | 6,665 |
| (c) Notified by Parents or Guardians | ... | ... | ... | — |
| (Very few—included under (d) (2).) | | | | |
| (d) (1) Discovered by Health Visitors | ... | ... | ... | 442 |
| (d) (2) Notified from Schools, &c. | ... | ... | ... | 2,161 |
| (e) Total households invaded | ... | ... | ... | 7,692 |

(f) Inquiry made in all households, with following result:—

| | | | | Households. | Cases. |
|-------------|-----|-----|-----|-------------|--------|
| 1 case only | ... | ... | ... | 6,355 | 6,355 |
| 2 cases | ... | ... | ... | 1,147 | 2,294 |
| 3 „ | ... | ... | ... | 159 | 477 |
| 4 „ | ... | ... | ... | 22 | 88 |
| 5 „ | ... | ... | ... | 6 | 30 |
| 6 „ | ... | ... | ... | 1 | 6 |
| 7 „ | ... | ... | ... | 1 | 7 |
| 11 „ | ... | ... | ... | 1 | 11 |
| | | | | 7,692 | 9,268 |

CITY OF LIVERPOOL.

COMPARATIVE VIEW OF TWELVE OF THE PRINCIPAL CAUSES OF
DEATH DURING THE YEAR 1918



CITY OF LIVERPOOL.

COMPARATIVE VIEW OF TWELVE OF THE PRINCIPAL CAUSES OF
DEATH DURING THE YEAR 1818



DEATHS FROM ZYMOTIC DISEASES.

Zymotic diseases were the cause of 3,073 deaths during the year 1918 and accounted for 20·1 per cent. of the total mortality within the City during this period. This high rate was occasioned by the excessive number of deaths from influenza. The death rate from the seven principal zymotic diseases was 1·9 per 1,000 of population. The deaths from the various types of disease during 1918 were as follows:—

| | QUARTERS. | | | | YEAR
1918. |
|----------------------|--------------|-------|-------|------|---------------|
| | March. | June. | Sept. | Dec. | |
| Total Zymotics | 530 | 489 | 595 | 1459 | 3,073 |
| Smallpox | ... | ... | ... | ... | ... |
| Measles | 74 | 211 | 89 | 33 | 407 |
| Scarlet Fever..... | 40 | 30 | 28 | 35 | 133 |
| Diphtheria | 50 | 55 | 54 | 69 | 228 |
| Whooping-cough | 238 | 88 | 28 | 10 | 364 |
| Diarrhoea | 40 | 45 | 224 | 77 | 386 |
| Influenza | 26 | 18 | 139 | 1205 | 1388 |
| Fever { | Typhus | ... | ... | ... | ... |
| | | ... | ... | ... | ... |
| Fever { | Typhoid..... | 2 | 5 | 1 | 13 |
| | | ... | ... | ... | ... |
| Other Zymotics..... | 60 | 37 | 28 | 29 | 154 |

NOTE.—Influenza, Measles, and Whooping-cough appear to have been predisposing causes in the case of many deaths primarily ascribed to Respiratory Disease inasmuch as one or other of these Zymotics preceded the fatal illness.

THE FOLLOWING TABLE SHOWING THE ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FIVE DECENNIAL PERIODS, IS INTERESTING AND INSTRUCTIVE. THE DECLINE IN THE MORE FORMIDABLE FORMS OF INFECTIOUS DISEASES IS VERY MARKED.

| Years. | Small Pox. | Typhus. | Enteric. | Scarlet Fever. | Measles. | Whooping Cough. | Diarrhoea. |
|---------------------|------------|---------|----------|----------------|----------|-----------------|------------|
| 1866 to 1875 | 237.4 | 652.8 | † — | 789.4 | 425.7 | 496.8 | 995.3 |
| 1876 to 1885 | 90.8 | 238.0 | 126.4 | 421.2 | 517.8 | 472.3 | 658.4 |
| 1886 to 1895 | 8.8 | 37.1 | 153.0 | 257.5 | 399.5 | 322.4 | 600.6 |
| *1896 to 1905 | 19.5 | 25.1 | 134.4 | 201.3 | 329.0 | 330.4 | 1,061.9 |
| 1906 to 1915 | 0.04 | 5.7 | 50.3 | 141.6 | 438.0 | 296.7 | 848.0 |
| Year 1918..... | — | — | 13 | 133 | 407 | 364 | 386 |

* Including extended City area.

† Records not available.

ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES
DURING EACH OF THE LAST FIVE DECENNIAL PERIODS, DISTINGUISHING THOSE
OF PERSONS ABOVE AND BELOW FIVE YEARS OF AGE.

| YEARS. | SMALLPOX. | | TYPHUS. | | ENTERIC. | | SCARLET FEVER. | | MEASLES. | | WHOPPING COUGH. | | DIARRHŒA. | |
|----------------|-----------|----------|----------|----------|----------|----------|----------------|----------|----------|----------|-----------------|----------|-----------|----------|
| | Above 5. | Below 5. | Above 5. | Below 5. | Above 5. | Below 5. | Above 5. | Below 5. | Above 5. | Below 5. | Above 5. | Below 5. | Above 5. | Below 5. |
| 1866 to 1875 | 141.7 | 95.7 | *— | *— | *— | — | 187.7 | 601.7 | 14.4 | 411.3 | 9.9 | 486.9 | 105.7 | 889.6 |
| 1876 to 1885 | 62.5 | 28.3 | +190.0 | +5.1 | +110.3 | +12.1 | 137.0 | 284.2 | 35.4 | 482.4 | 18.6 | 453.7 | 61.9 | 596.5 |
| 1886 to 1895 | 6.2 | 2.6 | 36.2 | .9 | 142.0 | 11.0 | 87.6 | 169.9 | 28.3 | 371.2 | 15.1 | 307.3 | 60.2 | 540.4 |
| **1896 to 1905 | 14.5 | 5.0 | 24.2 | .9 | 128.4 | 6.0 | 61.7 | 139.6 | 17.1 | 311.9 | 11.9 | 318.5 | 53.6 | 1,008.3 |
| 1906 to 1915 | .04 | — | 5.5 | .2 | 49.0 | 1.3 | 50.9 | 90.7 | 23.9 | 414.1 | 9.2 | 287.5 | 30.8 | 817.2 |
| 1918 | — | — | — | — | 13 | — | 60 | 73 | 21 | 386 | 13 | 351 | 9 | 377 |

* During these years the ages at death from Typhus and Enteric were not differentiated.

† During the six years, 1880-1885.

** Including extended City area.

The following table shows the number of deaths, the annual average death-rate per 100,000 of the population from the undermentioned forms of disease during the last six decades, 1856 to 1915, and during 1918:—

| DISEASE. | Average Population | 1856
to 1865. | 1866
to 1875. | 1876
to 1885. | 1886
to 1895. | 1896†
to 1905. | 1906‡
to 1915 | 1918 |
|-------------------|--------------------------------|------------------|------------------|------------------|------------------|-------------------|------------------|----------|
| | | 443,938. | 493,405. | 538,651. | 536,974. | 691,351. | 747,015. | 781,948. |
| Scarlet
Fever | Total Deaths ... | 5,994 | 7,894 | 4,212 | 2,575 | 2,013 | 1,416 | 133 |
| | Rate per 100,000
per annum. | 135·0 | 159·9 | 78·1 | 47·9 | 29·1 | 19·0 | 17·0 |
| Typhus
Fever | Total Deaths ... | 7,482 | 6,528 | 2,380 | 371 | 251 | 57 | — |
| | Rate per 100,000
per annum. | 168·5 | 132·2 | 44·1 | 6·9 | 3·6 | 0·8 | 0·0 |
| Enteric
Fever | Total Deaths ... | * | * | 1,264 | 1,530 | 1,344 | 503 | 13 |
| | Rate per 100,000
per annum. | — | — | 21·5 | 28·4 | 19·3 | 6·7 | 1·6 |
| Measles | Total Deaths ... | 3,215 | 4,257 | 5,178 | 3,995 | 3,290 | 4,380 | 407 |
| | Rate per 100,000
per annum. | 72·4 | 86·2 | 96·1 | 74·3 | 47·5 | 58·6 | 52·0 |
| Whooping
Cough | Total Deaths ... | 4,779 | 4,968 | 4,723 | 3,224 | 3,304 | 2,967 | 364 |
| | Rate per 100,000
per annum. | 107·6 | 100·6 | 87·6 | 60·0 | 47·7 | 39·7 | 46·5 |
| Smallpox | Total Deaths ... | 1,673 | 2,374 | 908 | 88 | 195 | 3 | — |
| | Rate per 100,000
per annum. | 37·6 | 48·1 | 16·8 | 1·6 | 2·8 | 0·04 | 0·0 |
| Phthisis | Total Deaths ... | 15,572 | 16,476 | 13,754 | 11,436 | 12,632 | 12,010 | 1,400 |
| | Rate per 100,000
per annum. | 350·7 | 333·9 | 255·3 | 212·9 | 182·7 | 160·7 | 179·0 |

† City Boundaries extended in 1895, 1902, 1905.

* Records not available.

‡ „ „ „ 1913.

CANCER.

The following table indicates the number of deaths from Cancer during the year 1918, and the part of the body affected:—

| DISEASE. | Males. | Females. | Total. |
|----------------------------------|--------|----------|--------|
| Cancer of Buccal Cavity | 76 | 9 | 85 |
| „ Stomach and Bowels..... | 122 | 110 | 232 |
| „ Intestines | 84 | 82 | 166 |
| „ Breast | 1 | 51 | 52 |
| „ Female Generative Organs | — | 101 | 101 |
| „ Skin | 8 | 3 | 11 |
| „ Parts not specified | 64 | 39 | 103 |
| Total | 355 | 395 | 750 |

DEATHS FROM EXCESSIVE DRINKING, &c.

The returns for the year show the welcome decrease previously noted in the number of deaths due to or accelerated by excessive drinking of intoxicating liquors has been maintained. The beneficial results obtained by the restricted manufacture and sale of intoxicating drink are not to be measured by a reduced mortality only, but there is also a great decrease in the number of convictions for drunkenness and in the number of cases of delirium tremens coming under treatment in public institutions.

The decrease in the mortality from excessive drinking is especially noticeable in regard to females, and has been followed by a decrease in the numbers of infants dying from suffocation caused through overlying by their parents. The following table shows the deaths due to excessive drinking during the past five years:—

| YEAR. | MALES. | FEMALES. | TOTAL. |
|------------------------|--------|----------|--------|
| 1914 | 73 | 52 | 125 |
| 1915 | 48 | 38 | 86 |
| 1916 | 35 | 9 | 44 |
| 1917 | 33 | 15 | 48 |
| 1918 | 14 | 2 | 16 |
| 1919
(to June 30th) | 3 | — | 3 |

The deaths of infants under one year of age from suffocation have been as follows:—

| YEAR. | DEATHS. |
|----------------------------|---------|
| 1914 | 76 |
| 1915 | 50 |
| 1916 | 36 |
| 1917 | 23 |
| 1918 | 26 |
| 1919 (to June 30th) | 12 |

CITY OF LIVERPOOL.

Deaths from excessive drinking during the 18 years
1901 to 1918.

Marked reduction in number of deaths coincides with period
of restricted sale of Alcoholic Liquors.

1901. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.



CITY OF LIVERPOOL

Deaths from excessive drinking during the 14 years
1901 to 1918.

Alcohol reduction in number of deaths coincides with period
of restricted sale of Alcoholic Liquors



METEOROLOGY.

Mr. W. E. Plummer, M.A., F.R.A.S., Astronomer to the Mersey Docks and Harbour Board, has kindly furnished the following tables relating to Meteorological observations made by him at the Liverpool Observatory, Bidston:—

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

Latitude 53° 24' 5" N. Longitude 3° 4' 20" W.

Height above the Mean Level of the Sea 202 feet.

| 1918. | Barometer.
Mean. | Temperature.
Mean. | RAINFALL. | | Mean Humidity
of the air
(Complete Satura-
tion equal 100). |
|-----------------|---------------------|-----------------------|-----------|--|--|
| | | | Amount. | No. of days on
which .01 in.
or more fell. | |
| | Inches. | Degrees. | Inches. | | |
| January | 29.896 | 40.6 | 1.680 | 16 | 86 |
| February | 30.062 | 44.2 | 1.931 | 18 | 82 |
| March | 30.032 | 42.9 | 0.992 | 9 | 78 |
| April | 29.976 | 45.1 | 1.218 | 11 | 73 |
| May | 30.041 | 54.8 | 2.306 | 12 | 74 |
| June | 30.079 | 55.7 | 1.604 | 14 | 75 |
| July | 29.894 | 59.4 | 4.118 | 17 | 76 |
| August | 29.967 | 61.2 | 1.980 | 16 | 76 |
| September | 29.655 | 53.4 | 6.394 | 30 | 79 |
| October | 29.943 | 49.5 | 2.097 | 18 | 82 |
| November | 29.999 | 42.8 | 1.538 | 14 | 85 |
| December | 29.742 | 45.6 | 6.142 | 25 | 85 |

DIFFERENCE FROM THE AVERAGE QUANTITIES OBSERVED DURING THE
LAST 50 YEARS.

| 1918. | BAROMETER. | | TEMPERATURE. | | RAINFALL. | |
|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Above
Average. | Below
Average. | Above
Average. | Below
Average. | Above
Average. | Below
Average. |
| | Inches. | Inches. | Degrees. | Degrees. | Inches. | Inches. |
| January | ... | 0·050 | 1·4 | ... | ... | 0·428 |
| February | 0·141 | ... | 3·0 | ... | 1·220 | ... |
| March | 0·153 | ... | 0·7 | ... | ... | 0·891 |
| April | 0·067 | ... | ... | 2·2 | ... | 0·418 |
| May | 0·072 | ... | 2·8 | ... | 0·357 | ... |
| June | 0·091 | ... | ... | 1·7 | ... | 0·473 |
| July | ... | 0·056 | ... | 1·3 | 1·460 | ... |
| August | 0·053 | ... | 0·7 | ... | ... | 1·045 |
| September | ... | 0·311 | ... | 2·8 | 3·625 | ... |
| October..... | 0·071 | ... | ... | 0·1 | ... | 1·328 |
| November | 0·106 | ... | ... | 0·4 | ... | 1·003 |
| December..... | ... | 0·100 | 5·7 | ... | 3·428 | ... |

OBSERVATIONS OF VELOCITY OF WIND.

| 1918. | Average Hourly
Velocity
for Month. | Maximum
Hourly
Velocity. | Date. | Minimum
Hourly
Velocity. | Date. |
|---------------|--|--------------------------------|-------------|--------------------------------|-------------------------|
| | Miles. | Miles. | | Miles. | |
| January | 19·1 | 53 | Jan. 9 | 0 | January 3. |
| February.... | 21·9 | 58 | Feb. 9 | 1 | February 11, 20. |
| March..... | 13·6 | 47 | Mar. 6 | 0 | March 4, 24, 26. |
| April | 13·9 | 37 | April 6 | 0 | April 8, 9, 23, 25. |
| May | 11·4 | 48 | May 24 | 0 | May 4, 5, 17, 19, 29. |
| June | 16·9 | 57 | June 22 | 0 | June 2, 5. |
| July | 12·8 | 38 | July | 0 | July 13, 30. |
| August | 15·7 | 39 | Aug. 18, 22 | 0 | August 10, 11, 13, 24. |
| September.. | 21·3 | 52 | Sept. 10 | 0 | September 7. |
| October..... | 15·5 | 49 | Oct. 10 | 0 | October 13, 24. |
| November... | 14·8 | 54 | Nov. 5 | 0 | November 3, 17, 18, 19. |
| December... | 19·4 | 53 | Dec. 19 | 1 | December 17, 26, 30. |

CHILD WELFARE.

INFANT MORTALITY AND ITS PREVENTION.

The question of Infant Mortality and the preventive measures adopted for further protecting child life has been fully dealt with in Special Reports made to the Health Committee by the Medical Officer of Health. Statistics are given showing the variation in the rate of mortality in the different districts of the City.

The relation which the deaths of infants under one year of age has borne to every thousand births in the various districts of the City during the year 1918 and during the previous five years, 1913-1917, is shown in the following table:—

| DISTRICTS. | Number
of Births.
1918. | Number of
Deaths
under 1 year
of age.
1918. | Deaths
under 1 year
per 1000
Births.
1918. | Average
number of
Deaths under
1 year per
1000 Births
1913-1917. |
|-------------------------|-------------------------------|---|--|---|
| Scotland | 1,324 | 217 | 164 | 163 |
| Exchange | 858 | 160 | 186 | 194 |
| Abercromby | 850 | 109 | 128 | 140 |
| Everton | 2,954 | 419 | 142 | 144 |
| Kirkdale | 1,671 | 225 | 134 | 142 |
| West Derby (West) | 1,998 | 224 | 112 | 122 |
| Toxteth | 2,535 | 324 | 128 | 124 |
| Walton | 1,543 | 141 | 91 | 96 |
| West Derby (East) | 1,301 | 132 | 101 | 92 |
| Wavertree | 766 | 77 | 100 | 84 |
| Toxteth—(East) | 561 | 26 | 46 | 78 |
| Garston | 576 | 67 | 116 | 109 |
| Fazakerley | 92 | 6 | 65 | 109 |
| Woolton | 104 | 10 | 96 | — |
| City | 17,133 | 2,137 | 124 | 127 |

Further details in reference to action taken in connection with Maternal and Child Mortality has been set out in a special Memorandum which has been distributed to Members of the City Council.

The following table shows the number of deaths of infants below one year of age and the rate per 1,000 births during the last twenty-six years:—

| Year. | | | | No. of Deaths
below
One Year of Age. | Rate per
1,000 Births. |
|-------|-----|-----|-----|--|---------------------------|
| 1893 | ... | ... | ... | 3,863 | 210 |
| 1894 | ... | ... | ... | 3,210 | 179 |
| 1895 | ... | ... | ... | 4,441 | 202 |
| 1896 | ... | ... | ... | 3,833 | 175 |
| 1897 | ... | ... | ... | 4,488 | 201 |
| 1898 | ... | ... | ... | 4,111 | 184 |
| 1899 | ... | ... | ... | 4,481 | 199 |
| 1900 | ... | ... | ... | 4,203 | 186 |
| 1901 | ... | ... | ... | 4,089 | 187 |
| 1902 | ... | ... | ... | 3,899 | 162 |
| 1903 | ... | ... | ... | 3,775 | 159 |
| 1904 | ... | ... | ... | 4,735 | 196 |
| 1905 | .. | ... | ... | 3,710 | 154 |
| 1906 | ... | ... | ... | 4,137 | 171 |
| 1907 | ... | ... | ... | 3,383 | 143 |
| 1908 | ... | ... | ... | 3,355 | 140 |
| 1909 | ... | ... | ... | 3,377 | 143 |
| 1910 | ... | ... | ... | 3,216 | 139 |
| 1911 | ... | ... | ... | 3,466 | 154 |
| 1912 | ... | ... | ... | 2,778 | 125 |
| 1913 | ... | ... | ... | 2,987 | 132 |
| 1914 | ... | ... | ... | 3,219 | 139 |
| 1915 | ... | ... | ... | 2,866 | 133 |
| 1916 | ... | ... | ... | 2,421 | 117 |
| 1917 | ... | ... | ... | 2,071 | 115 |
| 1918 | ... | ... | ... | 2,137 | 124 |

CITY OF LIVERPOOL.

Infant Mortality per 1000 Births 1893 - 1918.

1893 . 4 . 5 . 6 . 7 . 8 . 9 . 1900 . 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10 . 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8



THE WORK OF THE FEMALE SANITARY STAFF.

The duties of the Health Visitor are many and varied, being especially directed to the prevention of disease and to the care of infants and young children. To further these aims, house-to-house visitation is carried out in the poorer parts of the City, and special visits are paid by trained Nurses to such cases as epidemic diarrhoea and the infectious fevers. Throughout every branch of the work it is the endeavour of the Health Visitor to engender in the people a desire for healthier and cleaner modes of life, to help them to realise the greater comfort in their homes which lies within their reach.

The duties assigned to the Female Staff include the following:—

Visits under Notification of Births Act.

House-to-house Inspection.

Attendance at School Medical Inspections, and following up in the homes cases of physical defects found by the Medical Inspector.

Attendance at Vision, Dental, Tonsils and Minor Ailments Clinics.

Visits to neglected and verminous school children, and ensuring the cleansing of verminous children.

Care of dirty and neglected aged persons.

Re-visits to Phthisis cases in connection with the work of the Tuberculosis Officers.

Visits to infectious school cases (Infectious Skin Diseases).

Visits and home nursing of cases of Influenza, Pneumonia, Measles and Whooping Cough.

Care of cases referred from various voluntary or other organisations, e.g.:—

Invalid Children's Association.

Central Relief Society.

Police.

Soldiers' and Sailors' Families' Association.

Relieving Officers.

Liverpool Society for Prevention of Cruelty to Children.

Work at Infant Welfare Centres. This includes:—

General Management of Centres.

Lecture—demonstrations to the Mothers in Cookery, Laundry Work, Sewing and Housewifery.

Visiting and demonstrating in the homes.

Home treatment of children suffering from infectious illness for whom hospital accommodation cannot be found. This work is carried out by a staff of fully-trained nurses who visit the cases once or twice daily as the need requires.

NOTIFICATION OF BIRTHS ACT, 1907.

| | | | |
|---|-----|-----|--------|
| Number of Births notified during the year | ... | ... | 15,662 |
| Number of Births visited during the year | ... | ... | 13,674 |
| Percentage visited during the year | ... | ... | 88 |

INFECTIOUS DISEASE IN SCHOOLS.

During the first half of the year a number of schools were closed, for varying periods, on account of the prevalence in them of Whooping Cough and Measles, and later, towards the end of June, Influenza began to make its appearance, necessitating the closing of a greater number, and at one period of the outbreak (October) the whole of the schools in the City were closed for a month, until 4th November.

PUBLIC ELEMENTARY SCHOOLS.

| | | <u>1917.</u> | <u>1918.</u> |
|---------------------------------------|-----|--------------|--------------|
| Number of Visits to Schools | ... | 2,107 | 1,908 |
| „ found incorrect | ... | 78 | 34 |
| „ of Water-closets and Latrines found | | | |
| dirty or defective | ... | 111 | 15 |
| „ of Notices issued for defects | ... | 3 | 14 |

NOTICES TO SCHOOL TEACHERS

The arrangements have been continued with the Education Committee that notice shall be sent to the Education Department and postcards to the Head Teachers of the various schools informing them when children from infected houses attend their schools; 8,471 cards were sent last year, as against 8,085 in the preceding year.

INFANT WELFARE CENTRES.

The following statistics relating to the working of the Centres during the year gives some indication of the useful nature of the work.

The high rate of infant mortality, attributable to improper feeding, justifies the continuation of the Centres at which a preparation of pure cows' milk is made to resemble human milk as closely as possible. This preparation is intended for the use of infants whose mothers are unable to suckle them. Dried milk was also substituted and supplied during the shortage of the Autumn and Winter.

The total number of persons supplied with milk during the year were 15,401, viz., 4,869 on the books at the beginning of the year, and 10,532 admitted during the year, representing 5,508 mothers and 9,893 infants. Of the mothers there were 588 Ante-Natal and 4,920 Post-Natal cases; of the infants, 5,626 were under and 4,267 over twelve months of age.

The Infant Welfare Dépôt at Harthill House, Calderstones, was opened in July, 1917, to supply prepared milk for infants to the under-mentioned Centres, and since the commencement of the scheme the numbers which have been supplied from the Centres are as follows:—

| | | Total
up to
1917. | Admitted
during
1918. | Total |
|--|---------------------------|-------------------------|-----------------------------|--------|
| Netherfield Road Centre | } No sterilising
done. | 8,784 | 2,150 | 10,934 |
| Earle Road Centre | | 6,256 | 1,406 | 7,652 |
| Park Road Centre | ... .. | 8,571 | 1,593 | 10,164 |
| Cazneau Street Centre | ... .. | 6,115 | 1,212 | 7,327 |
| <i>(Transferred to larger premises at
81, St. Anne Street, March, 1917.)</i> | | | | |
| Boaler Street Centre | ... .. | 3,669 | 1,174 | 4,843 |
| Hornby Street Centre | ... .. | 361 | — | 361 |
| <i>(Closed since 1911.)</i> | | | | |
| Rathbone Road Centre | ... .. | 478 | 414 | 892 |
| Mill Street Centre | ... .. | — | 1,063 | 1,063 |
| <i>(Opened January, 1918, to relieve
Park Road Centre.)</i> | | | | |
| Total supplied from Centres | ... .. | 34,234 | 9,012 | 43,246 |
| Total supplied from Dairies and
Agents | | 12,333 | 1,520 | 13,853 |
| | | 46,567 | 10,532 | 57,099 |

During the year the total number of customers supplied is shown as follows, viz. :—

| | |
|--|--------|
| Number remaining on the books from previous year ... | 4,869 |
| Number admitted during the year | 10,532 |
| | <hr/> |
| Total | 15,401 |
| | <hr/> |
| Number of discharges during the year | 9,765 |
| Number remaining on books at end of year | 5,636 |

It will be seen that the above figures show an increase in the number of customers remaining on the books of 767.

The number of attendances of mothers and infants at the Centres during the year for weighing and advice, etc., was 19,706.

The number of visits paid during the year to children in their own homes by the Inspectors attached to the Centres in order to see that the children were being properly fed and cared for was 6,753.

DRIED MILK.

The infants fed on dried milk during the year were 1,403, of whom 739 were admitted during the year.

The number remaining on the books at the end of the year was 767.

MIDWIVES ACT, 1902.

. During the year 1918 two hundred and ten midwives gave the required notice, under Section 10, of their intention to practise midwifery.

A total of 12,662 births was attended by these midwives, and 1,567 by the midwives on the staff of the Ladies' Charity, making altogether 83.0 per cent of the total number of births registered in the City. So far as can be ascertained there were no births attended during the year by uncertified women.

STATEMENT OF NOTIFICATIONS OF BIRTHS RECEIVED DURING

THE YEARS:—

| | 1917. | | 1918. | |
|---------------------------------|---------|---|---------|---|
| Notifications Received from | Births. | Per centage of Births Registered in the City. | Births. | Per centage of Births Registered in the City. |
| Certified Midwives | 12,592 | 70·32 | 12,662 | 73·90 |
| Medical Attendants..... | 1,281 | 7·16 | 1,002 | 5·84 |
| Poor Law Institutions | 385 | 2·15 | 402 | 2·34 |
| Ladies' } Maternity Hospital... | 508 | 2·83 | 526 | 3·07 |
| Charity } District Homes | 934 | 5·21 | 981 | 5·78 |
| Royal Infirmary | — | — | 16 | 0·09 |
| “Cradlehurst,” Edge Lane ... | — | — | 46 | 0·26 |
| Uncertified Women..... | — | — | — | — |
| Parents | 34 | 0·19 | 27 | 0·15 |
| | 15,734 | 87·87 | 15,662 | 91·41 |

| | | | | |
|---|---|------|---|--------|
| Total Number of Births registered in the City | } | 1917 | — | 17,906 |
| | | 1918 | — | 17,133 |

STILL BIRTHS.

The number of still births notified by midwives was 319, which is at the rate of 2·24 per cent. of the births attended.

The following figures give the months of pregnancy during which the still births took place, viz.:—

| | 1918. |
|----------------------|-------|
| Sixth month | 21 |
| Seventh month | 82 |
| Eighth month | 68 |
| Ninth month | 148 |
| Total | 319 |

MEDICAL ASSISTANCE.

Under the Rules issued by the Central Midwives' Board, a midwife must advise that medical assistance shall be called in where there is any abnormal circumstances connected with the confinement.

The following table gives the details of the complications for which medical assistance was required during the past two years:—

| | <u>1917.</u> | <u>1918</u> |
|--|--------------|-------------|
| MOTHER : | | |
| Abnormal Presentation : | | |
| Brow or Face Presentation | 5 | 12 |
| Occipito-posterior Presentation | 9 | 25 |
| Transverse Presentation | 32 | 29 |
| Breech Presentation | 17 | 22 |
| Foot Presentation | 10 | 9 |
| Cord Presentation | 25 | 22 |
| Placenta Prævia | 10 | 6 |
| Deformed Pelvis | 40 | 27 |
| Ante-partum Hæmorrhage | 68 | 84 |
| Post-partum Hæmorrhage | 43 | 38 |
| Retained Placenta or Membranes | 72 | 70 |
| Ruptured Perinæum | 198 | 172 |
| Multiple Births | 13 | 14 |
| Abortion or Premature Birth | 52 | 97 |
| Pyrexia | 77 | 100 |
| Eclampsia | 20 | 22 |
| Obstructed Labour, Uterine Inertia, or requiring | | |
| Instrumental Assistance | 356 | 300 |
| Influenza | — | 29 |
| Various | 130 | 154 |
| CHILD : | | |
| Injury at Birth | 1 | 1 |
| Malformation | 19 | 30 |
| Feebleness and Prematurity | 146 | 125 |
| Skin Eruption | — | 26 |
| Ophthalmia | — | 25 |
| Other conditions in child | 53 | 39 |
| | <hr/> 1,396 | <hr/> 1,478 |

PUERPERAL FEVER.

The number of cases of Puerperal Fever notified to the Medical Officer of Health during the year was 28, of which 16 proved fatal. This gives a death-rate of 0·93 per 1,000 births in the City.

Twenty-three cases were removed to hospital, viz.:—1 to Brownlow Hill Infirmary; 2 to Mill Road Infirmary; 17 to Walton Institution; 2 to Toxteth Infirmary; and 1 to the City Hospital North, Netherfield Road.

After the usual enquiries were made, 20 cases (of which 9 died) were found to have occurred in the practice of midwives. One midwife had three cases.

The following table shows the annual rate of mortality per 1,000 of the total births since the year 1913:—

| Year. | Total number of births in the City. | Total number of :— | | Death rate per 1,000 births. | Removed to City Hospital, Fazakerley. |
|-------|-------------------------------------|--------------------|---------|------------------------------|---------------------------------------|
| | | Cases. | Deaths. | | |
| 1913 | 22,555 | 55 | 18 | 0·80 | 25 |
| 1914 | 23,065 | 56 | 31 | 1·34 | 26 |
| 1915 | 21,586 | 54 | 27 | 1·25 | — |
| 1916 | 20,679 | 52 | 22 | 1·06 | 1 |
| 1917 | 17,906 | 33 | 16 | 0·89 | — |
| 1918 | 17,133 | 28 | 16 | 0·93 | — |

OPHTHALMIA NEONATORUM.

INFLAMMATION OF THE EYES OF THE NEWLY-BORN.

The following figures give some details as to the sources of information and character of the cases dealt with during the year:—

The total number of cases brought to the notice of the department, 624.

| | | | | | | |
|-----|------------------------------|-----|-----|-----|-----|-----|
| (1) | Reported by Midwives | ... | ... | ... | ... | 469 |
| (2) | do. Doctors and Eye Hospital | ... | ... | ... | ... | 62 |
| (3) | do. Female Inspectors | ... | ... | ... | ... | 90 |
| (4) | do. in other ways | ... | ... | ... | ... | 3 |

The above cases consisted of:—

| | | | | | | |
|-----|---------------------------|-----|-----|-----|-----|-----|
| (1) | Mild cases | ... | ... | ... | ... | 402 |
| (2) | Severe cases | ... | ... | ... | ... | 164 |
| (3) | Under private treatment | ... | ... | ... | ... | 21 |
| (4) | Not Ophthalmia Neonatorum | ... | ... | ... | ... | 37 |

The majority of the cases that went to hospital, either as out-patients or who were admitted as in-patients were treated at St. Paul's Eye Hospital, and the remainder at the Eye and Ear Infirmary, Myrtle Street. Midwives, realizing the need of prompt attention, in many cases sent the infants to the hospital, and in some instances have taken the infant themselves.

The Authorities of the St. Paul's Eye Hospital reserve 9 beds and 9 cots for the treatment of this disease, so that infants who require constant supervision and treatment can be admitted with their mothers, and are therefore not deprived of the necessary maternal nourishment and care.

The satisfactory results of this work are shown by the following figures:—

| | | | | |
|--|-----|-----|-----|-----|
| Number of cases treated in their homes | ... | ... | ... | 318 |
| Do. do. sent to hospital as out-patients | ... | ... | ... | 200 |
| Do. do. admitted to hospital | ... | ... | ... | 69 |

As indicating the persistence of maternal infection or re-infection, it is interesting to note that in 69 cases previous children in the family had been similarly affected.

| | | | | | |
|--|-----|-----|-----|-----|-----|
| Number of cases cured | ... | ... | ... | ... | 525 |
| Do. do. still under treatment at 31/12/18 | ... | ... | ... | ... | 30 |
| Do. do. sight of both eyes badly affected | ... | ... | ... | ... | 1 |
| Do. do. sight of one eye slightly impaired | ... | ... | ... | ... | 10 |
| Do. do. totally blind | ... | ... | ... | ... | 2 |
| Do. do. not requiring visits of inspector | ... | ... | ... | ... | 19 |

There were three instances in which the parents and the patients removed to other towns; the names and addresss were forwarded to the authorities of their destinations.

SUMMARY OF VISITS TO MIDWIVES, OPHTHALMIA CASES, etc.

The following statement gives the total number of visits made by the inspectors during the year:—

| | | | | |
|---|-----|-----|-----|--------------------|
| Routine visits to Midwives | ... | ... | ... | 1,340 |
| General enquiries into work of Midwives | ... | ... | ... | 2,523 |
| Enquiries as to cases of Puerperal Fever | ... | ... | ... | 27 |
| Special enquiries <i>re</i> Accounts for Emergency Assistance | ... | ... | ... | 853 |
| Visits and re-visits as to cases of Ophthalmia | ... | ... | ... | 6,094 |
| | | | | <hr/> 10,837 <hr/> |

TUBERCULOSIS.

Notwithstanding the absence of practically the whole permanent Medical Staff and the limitations imposed by war conditions, the amount of work undertaken by the Tuberculosis Department has been greatly developed during the last two years, and a large amount of valuable work has been done.

In accordance with the Scheme adopted by the City Council, applications for examinations and treatment from all the sources enumerated below have been dealt with:—

- (a) From patients themselves, and through their Medical Attendants.
- (b) From the Local Pensions Committee and the Pensions Board.
- (c) From the Insurance Commissioners.
- (d) From the Medical Boards formed by the Ministry of National Service.
- (e) From the Voluntary Agencies in the City.
- (f) From the School Medical Officers.

It will be observed from Table “A” that there has been a gradual increase since 1914 in the notifications of Pulmonary Tuberculosis and to a lesser extent of Surgical Tuberculosis. This increase in the Notifications does not necessarily mean that the incidence of Tuberculosis in the City has grown to a corresponding extent and certain other factors must be taken into consideration before an accurate judgment in this matter can be arrived at. These are:—

- (a) The greater attention now being paid to earlier diagnosis.
- (b) The medical examination of practically the whole adult male population by the Army Authorities.
- (c) The widespread nature of the influenza epidemic with its special liability to pulmonary complications.

That there has been some increase, however, is undoubted, and probably a much more accurate idea of its extent is obtained from an analysis of the figures given in the table of deaths from tuberculosis. These, it will be noted, have, during the past five years, increased from 1,508 in the year 1914 to 1,791 during 1918.

TABLE A.

1918.

ALL FORMS OF TUBERCULOSIS NOTIFIED.

| Year. | Pulmonary. | Non-Pulmonary. | Total. |
|-------|------------|----------------|--------|
| 1914 | 2471 | 928 | 3399 |
| 1915 | 2220 | 826 | 3046 |
| 1916 | 2702 | 643 | 3345 |
| 1917 | 3778 | 639 | 4417 |
| 1918 | 3204 | 802 | 4006 |

DEATHS FROM TUBERCULOSIS.

| Year. | Pulmonary. | Non-Pulmonary. | Total. |
|-------|------------|----------------|--------|
| 1914 | 1132 | 376 | 1508 |
| 1915 | 1299 | 367 | 1666 |
| 1916 | 1254 | 382 | 1636 |
| 1917 | 1357 | 400 | 1757 |
| 1918 | 1400 | 391 | 1791 |

PERSONS EXAMINED (Insured, Dependants and Non-Insured).

| Year. | Total persons examined. |
|-------|-------------------------|
| 1914 | 1437 |
| 1915 | 1751 |
| 1916 | 2124 |
| 1917 | 4068 |
| 1918 | 3805 |

Medical Board Cases ceased in September, 1918.

A reference to this Table will also shew how very largely the number of examinations made by the Medical Officers of the Tuberculosis Department has increased during the past two years.

During the last year the problem of the discharged tuberculous soldier or sailor has been prominently before the Authorities, more particularly in respect to Sanatorium accommodation. This problem is one that differs in extent, but not in kind, from the larger question of the needs of the City generally.

The number of discharged men suffering from tuberculosis caused or aggravated by military service, referred by the Insurance Commissioners and the Local Pensions Committee, is shewn in the following Table "B":—

TABLE B.
NAVY AND ARMY CASES.—1918.

| Year. | Pulmonary. | Non-Pulmonary. | Total. |
|-------|------------|----------------|--------|
| 1915 | 51 | 1 | 52 |
| 1916 | 176 | 2 | 178 |
| 1917 | 333 | 7 | 340 |
| 1918 | 525 | 9 | 534 |

An increase of 194 as compared with 1917, and 482 with 1915.

In addition to these, 862 men were referred to the Tuberculosis Officer for examination, of whom 763 were sent by the Medical Boards from January to September, 1918, and 99 by the Pensions Boards from September to December, 1918. The results of these examinations are shewn in Table "C."

TABLE C.

| | No
Action
Taken. | Diagnosis
Deferred. | Disease
Active. | Disease
Quiescent. | Non-
Tubercular | Non-
Pulmonary | Failed
to
Attend. | Total. |
|-------------------------|------------------------|------------------------|--------------------|-----------------------|--------------------|-------------------|-------------------------|--------|
| Medical
Board Cases | 7 | 15 | 161 | 304 | 221 | 3 | 52 | 763 |
| Pensions
Board Cases | 3 | 6 | 41 | 13 | 29 | 1 | 6 | 99 |

Under the arrangements made for the treatment of discharged tuberculous soldiers, every discharged man suffering from tuberculosis is referred by the Insurance Commissioners to the appropriate Insurance Committee with a view to arranging treatment with the least possible delay. The men are then examined by one of the Tuberculosis Officers, and an opinion arrived at as to whether the disease is attributable to or aggravated by military service, whilst at the same time the total amount of disability is estimated. Information is also sent by the Military Authorities to the Medical Officer of Health of the district in which the man is domiciled, and this is forwarded by the Medical Officer of Health to the Tuberculosis Officer.

In addition to the cases referred by the Commissioners, a large number of cases are reported by the Local Pensions Committee following examinations by the Medical Referees.

In accordance with a memorandum of the Local Government Board, December, 1918, arrangements have been made by the Medical Officer of Health for the home visiting of discharged men, to commence on January 1st, 1919. These duties will be carried out by specially qualified members of the female sanitary staff.

SANATORIUM ACCOMMODATION.

Negotiations were entered into with the King Edward VII Welsh National Memorial Association and with other bodies, and as a result of these efforts the following accommodation has been secured at Sanatoria outside the City:—

| | | | | | |
|--------------------------------|-----|-----|-----|-----|----|
| North Wales Sanatorium—Denbigh | ... | ... | ... | ... | 10 |
| Wallasey Sanatorium | ... | ... | ... | ... | 10 |
| Grosvenor Sanatorium | ... | ... | ... | ... | 42 |
| Daneswood Sanatorium | ... | ... | ... | ... | 6 |
| Brompton Hospital | ... | ... | ... | ... | 14 |
| Bournemouth Sanatorium | ... | ... | ... | ... | 1 |
| Midhurst Sanatorium | ... | ... | ... | ... | 1 |
| Beechwood Hospital | ... | ... | ... | ... | 5 |
| Maghull Sanatorium | ... | ... | ... | ... | 1 |
| Hermitage Sanatorium | ... | ... | ... | ... | 1 |
| Total | ... | ... | ... | ... | 91 |

The very high proportion of relapses which occur when the apparently cured tuberculosis individual returns from the Sanatorium to his or her home, or to unsuitable work in unhygienic surroundings, is being increasingly recognized, and to meet this difficulty various schemes of Industrial and Farm Colonies are receiving attention.

INSTITUTIONAL TREATMENT.

The total number of cases receiving Institutional treatment during the year number 1,639. Details of the cases under treatment are shewn in Table 2, which also gives particulars relating to discharges, deaths and the cases remaining under treatment at the end of the year.

The results of treatment are shewn in Table 3, from which it will be noted that out of a total of 1,206 cases discharged during the year, 940, or 77.94 per cent, shewed an improvement, 127, or 10.53 per cent. no improvement, and in 139, or 11.52 per cent., death occurred. The remaining number of cases under institutional treatment on the 31st December, 1918, was 433, as compared with 490 on the 31st December, 1917, and 401 on the 31st December, 1916.

AFTER CARE.

All patients leaving Sanatoria are referred to their doctors in order that a continuity of treatment may be obtained and, in addition, they are called up as soon as possible to one or other of the Tuberculosis Institutes in order that they may be examined by one of the Tuberculosis Medical Officers. Careful notes are kept of these examinations, and the signs found are compared with those given by the Sanatorium Medical Officers on discharge. The improvement, or otherwise, is thus estimated, and the patient is advised as to the type of work, etc., which he is capable of performing. Observation of these discharged patients

is also maintained by visits to the patients' own homes by the Nurses attached to the Tuberculosis Institutes. The information thus acquired as to the general suitability, or otherwise, of the patient's domestic surroundings is of the utmost value; whilst at the same time any suspicious cases of illness in other members of the family are brought to the notice of the Tuberculosis Medical Officers, and in this way many early cases of phthisis, which would otherwise have been missed, are brought to light and receive suitable treatment. In all, during the past year, no less than 3,964 such visits have been made. Though, in this way, the more urgent and obvious cases occurring amongst "contacts" have been dealt with, it has not been possible, owing to the shortage of Medical Officers, to arrange for the routine examination of all contacts, but it is hoped that with the return to normal conditions this important branch of the work may be efficiently dealt with in the near future. In addition, the usual duties of disinfection of bedding, clothing and apartments, sanitary inspection of houses and places of business, and the distribution of cards containing information and advice to consumptive people and those living with them are carried out as before by the Staff of the Health Department.

EXTRA NOURISHMENT.

Owing partly to the shortage in institutional accommodation and partly to the high prices prevailing, it has been found necessary to continue the grants of extra nourishment in the form of milk, eggs, beef extract, etc., on a fairly liberal scale. Though in December, 1918, the War Pensions Committee undertook the provision of extra nourishment in the case of discharged men, providing the disability was the result of service conditions, the Insurance Committee still deal with those cases of discharged men whose condition is not attributable to service and also the many other applicants for sanatorium benefit who desire assistance in this respect.

TABLE No. 1.

STATEMENT SHEWING PERSONS EXAMINED AND CASES UNDER TREATMENT DURING THE YEAR 1918.

| | PERSONS EXAMINED | | | Treatment first recommended to
Persons shewn in Col. 3 | | | Total Cases under treatment
during course of year | | | | |
|---|-------------------------------------|-----------------------------------|--|---|--------------|---------------|--|-------------|--------------|----------------|----------------|
| | Total
Persons
Examined
(1) | Found to
be
Non-T.B.
(2) | Recom-
mended for
treatment
(3) | Dom.
(4) | Disp.
(5) | Instn.
(6) | Total.
(7) | Dom.
(8) | Disp.
(9) | Instn.
(10) | Total.
(11) |
| INSURED PERSONS— | | | | | | | | | | | |
| Men | 984 | 225 | 759 | 441 | 273 | 45 | 759 | 869 | 456 | 550 | 1,875 |
| Women | 282 | 8 | 274 | 227 | 31 | 16 | 274 | 333 | 68 | 164 | 565 |
| Total | 1266 | 233 | 1033 | 668 | 304 | 61 | 1033 | 1202 | 524 | 714 | 2,440 |
| DEPENDANTS, ADULTS | | | | | | | | | | | |
| Men | 16 | 1 | 15 | 7 | 7 | 1 | 15 | 16 | 13 | 12 | 41 |
| Women | 206 | 7 | 199 | 170 | 21 | 8 | 197 | 254 | 52 | 102 | 408 |
| ” CHILDREN— | | | | | | | | | | | |
| Boys | 328 | 28 | 300 | 169 | 39 | 92 | 300 | 287 | 62 | 284 | 633 |
| Girls | 370 | 35 | 335 | 183 | 56 | 96 | 335 | 274 | 78 | 279 | 632 |
| Total | 920 | 71 | 849 | 529 | 123 | 197 | 849 | 832 | 205 | 677 | 1,714 |
| NON-INSURED AND
NON-DEPENDANT... | 402 | 16 | 386 | 96* | 195 | 95 | 386 | 150* | 298 | 248 | 696 |
| TOTALS | 2,588 | 320 | 2,268 | 1,293 | 622 | 353 | 2,268 | 2,184 | 1,027 | 1,639 | 4,850 |
| INCOMPLETE APPLICA-
TIONS AND MEDICAL
BOARD CASES FROM
OUTSIDE THE AREA,
ETC..... | 1,217 | 175 | | | | | | | | | |
| | 3,805 | 495 | | | | | | | | | |

* Unofficial Domiciliary.

* Unofficial Domiciliary.

TABLE No. 2.

INSTITUTIONAL TREATMENT (ADMISSIONS AND DISCHARGES) 1918.

| | INSURED PERSONS | | DEPENDANTS. | | | | NON-INSURED | TOTALS |
|--|-----------------|-----|-------------|-----|-----------|-----|-------------|--------|
| | | | Adults. | | Children. | | | |
| | M. | F. | M. | F. | M. | F. | | |
| Under treatment at beginning of year ... | 146 | 48 | 4 | 28 | 83 | 100 | 81 | 490 |
| Admitted during 1918 | 404 | 116 | 8 | 74 | 201 | 179 | 167 | 1149 |
| TOTAL | 550 | 164 | 12 | 102 | 284 | 279 | 248 | 1639 |
| Discharged and deaths during 1918 | 419 | 120 | 12 | 83 | 181 | 182 | 209 | 1206 |
| Under treatment at end of year | 131 | 44 | — | 19 | 103 | 97 | 39 | 433 |

TABLE No. 3.

RESULTS OF TREATMENT IN CASES DISCHARGED FROM INSTITUTIONS
TOGETHER WITH DEATHS THEREIN.

| | Improved
(1) | Not
Improved.
(2) | Died.
(3) | Totals.
(4) |
|---------------------|-----------------|-------------------------|--------------|----------------|
| INSURED PERSONS— | | | | |
| Men | 306 | 59 | 54 | 419 |
| Women | 92 | 11 | 17 | 120 |
| Total | 398 | 70 | 71 | 539 |
| DEPENDANTS, ADULTS— | | | | |
| Men | 8 | 3 | 1 | 12 |
| Women | 66 | 7 | 10 | 83 |
| „ CHILDREN— | | | | |
| Boys | 157 | 8 | 16 | 181 |
| Girls | 150 | 18 | 14 | 182 |
| Totals | 381 | 36 | 41 | 458 |
| NON-INSURED | 161 | 21 | 27 | 209 |
| TOTALS ... | 940 | 127 | 139 | 1206 |
| | 77.94 % | 10.53 % | 11.52 % | |

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912,
AND
PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS (No. 2), 1918.

Summary of Notifications during the period from the 30th
December, 1917, to 28th December, 1918:—

| Age-periods. | Notifications on Form A. | | | | | | | | | | | | Total
Notifica-
tions on
Form A. |
|----------------|----------------------------------|-------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------|---|---|
| | Number of Primary Notifications. | | | | | | | | | | | | |
| | 0
to
1 | 1
t
5 | 5
to
10 | 10
to
15 | 15
to
20 | 20
to
25 | 25
to
35 | 35
to
45 | 45
to
55 | 55
to
65 | 65
and up-
wards. | Total
Primary
Notifica-
tions. | |
| Pulmonary— | | | | | | | | | | | | | |
| Males | 1 | 38 | 90 | 117 | 156 | 130 | 348 | 403
169 | 283 | 92 | 28 | 1,686 | 1,847 |
| Females | 1 | 21 | 121 | 107 | 108 | 116 | 212 | | 95 | 29 | 9 | 988 | 1,088 |
| Non-Pulmonary— | | | | | | | | | | | | | |
| Males | 14 | 98 | 105 | 50 | 21 | 9 | 7 | 6 | 3 | 2 | 1 | 316 | 327 |
| Females | 8 | 83 | 86 | 71 | 38 | 14 | 14 | 5 | 6 | 5 | 1 | 331 | 341 |

| Age-periods. | Notifications on Form B. | | | | | Number of
Notifications on
Form C. | |
|----------------|----------------------------------|---------|----------|--|---|--|------------|
| | Number of Primary Notifications. | | | | Total
Notifica-
tions on
Form B. | Poor Law
Institutions. | Sanatoria. |
| | Under
5 | 5 to 10 | 10 to 15 | Total
Primary
Notifica-
tions | | | |
| Pulmonary— | | | | | | | |
| Males | — | 18 | 15 | 28 | 28 | 216 | 156 |
| Females | — | 18 | 22 | 40 | 40 | 104 | 91 |
| Non-Pulmonary— | | | | | | | |
| Males | — | 25 | 29 | 54 | 56 | 23 | 24 |
| Females | — | 35 | 31 | 66 | 68 | 20 | 6 |

The following table shews the various districts in the City where patients suffering from tuberculosis lived at the date of notification. The table refers to all primary notifications of cases during the year 1918, and differentiates between cases of Pulmonary and Non-Pulmonary Tuberculosis:—

| Districts. | | | | | | Phthisis. | Tuberculosis
(non-pulmonary) |
|---|-----|-----|-----|-----|-----|-----------|---------------------------------|
| SCOTLAND | ... | ... | ... | ... | ... | 237 | 57 |
| EXCHANGE | ... | ... | ... | ... | ... | 229 | 45 |
| ABERCROMBY | ... | ... | ... | ... | ... | 283 | 48 |
| EVERTON | ... | ... | ... | ... | ... | 536 | 148 |
| KIRKDALE | ... | ... | ... | ... | ... | 212 | 60 |
| WEST DERBY (WEST) | ... | ... | ... | ... | ... | 283 | 115 |
| TOXTETH | ... | ... | ... | ... | ... | 247 | 81 |
| WALTON | ... | ... | ... | ... | ... | 170 | 65 |
| WEST DERBY (EAST) | ... | ... | ... | ... | ... | 191 | 52 |
| WAVERTREE | ... | ... | ... | ... | ... | 113 | 40 |
| TOXTETH (EAST) | ... | ... | ... | ... | ... | 94 | 23 |
| GARSTON | ... | ... | ... | ... | ... | 82 | 23 |
| FAZAKERLEY | ... | ... | ... | ... | ... | 14 | 1 |
| WOOLTON | ... | ... | ... | ... | ... | 7 | 5 |
| EMIGRANTS, SEAMEN, &c., PASSING
THROUGH THE CITY | ... | ... | ... | ... | ... | 44 | 4 |
| Total | | | | | | 2742 | 767 |

The Group of Tubercular Diseases includes Phthisis, Tubercular Peritonitis, Tubercular Meningitis, and other forms of Tuberculosis. They occasioned 1,791 deaths in the City of Liverpool during the year 1918.

DEATHS FROM PHTHISIS.

The number of deaths from Phthisis during the year was 1,400. The number of deaths during each of the preceding ten years, 1908-1917, has been as follows:—1,288, 1,116, 1,072, 1,313, 1,189, 1,183, 1,132, 1,299, 1,254, 1,357.

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

| DISTRICTS. | | | | QUARTERS. | | | | | | | | YEAR 1918. | | |
|-------------------|-----|-----|-----|-----------|-----|-------|-----|-------|-----|----------------|-----------|------------|-----|--------|
| | | | | March. | | June. | | Sept. | | Dec. | | M. | F. | Total. |
| | | | | M. | F. | M. | F. | M. | F. | M. | F. | | | |
| Scotland... | ... | ... | ... | 27 | 17 | 11 | 13 | 9 | 10 | 13 | 15 | 60 | 55 | 115 |
| Exchange | ... | ... | ... | 26 | 12 | 18 | 6 | 19 | 13 | 23 | 13 | 86 | 44 | 130 |
| Abercromby | ... | ... | ... | 22 | 8 | 21 | 8 | 22 | 11 | 21 | 8 | 86 | 35 | 121 |
| Everton | ... | ... | ... | 33 | 34 | 27 | 31 | 33 | 34 | 31 | 28 | 124 | 127 | 251 |
| Kirkdale... | ... | ... | ... | 20 | 19 | 17 | 19 | 20 | 9 | 13 | 24 | 70 | 71 | 141 |
| West Derby (West) | ... | ... | ... | 27 | 18 | 18 | 29 | 27 | 19 | 17 | 17 | 89 | 83 | 172 |
| Toxteth | ... | ... | ... | 16 | 16 | 22 | 20 | 23 | 17 | 26 | 28 | 87 | 81 | 168 |
| Walton | ... | ... | ... | 9 | 10 | 9 | 8 | 10 | 5 | 18 | 18 | 46 | 41 | 87 |
| West Derby (East) | ... | ... | ... | 16 | 9 | 9 | 11 | 11 | 7 | 7 | 10 | 43 | 37 | 80 |
| Wavertree | ... | ... | ... | 8 | 3 | 9 | 3 | 5 | 8 | 10 | 10 | 32 | 24 | 56 |
| Toxteth (East) | ... | ... | ... | 4 | 3 | 2 | 5 | 5 | 2 | 6 | 3 | 17 | 13 | 30 |
| Garston | ... | ... | ... | 7 | 3 | 6 | 2 | 4 | 5 | 4 | 4 | 21 | 14 | 35 |
| Fazakerley | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | ... | 2 | 1 | 4 | 5 |
| Woolton | ... | ... | ... | ... | 3 | ... | 1 | ... | ... | ... | 2 | ... | 6 | 6 |
| No Address | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | 2 | 1 | 3 |
| City | ... | ... | ... | 215 | 155 | 171 | 158 | 188 | 141 | 190 | 182 | 764 | 636 | 1,400 |
| AGES AT DEATH. | | | | | | | | | | | | | | |
| Under 1 year. | 1— | 2— | 5— | 10— | 15— | 20— | 30— | 40— | 50— | 60 & up-wards. | All Ages. | | | |
| ... | 8 | 25 | 31 | 61 | 153 | 283 | 312 | 285 | 166 | 76 | 1,400 | | | |

DEATHS FROM OTHER TUBERCULAR DISEASES.

Viz.:—Tubercular Peritonitis, Tubercular Meningitis, and other forms of Tuberculosis.

| DISTRICTS. | | | | | Tubercular
Peritonitis. | | Tubercular
Meningitis. | | Other forms of
Tuberculosis. | | YEAR 1918. | | |
|-------------------|-----|-----|-----|-----|----------------------------|-----|---------------------------|-----|---------------------------------|--------------------|--------------|-----|-----|
| | | | | | | | | | | | M. | F. | T. |
| Scotland | ... | ... | ... | ... | 1 | 4 | 4 | 5 | 3 | 2 | 8 | 11 | 19 |
| Exchange | ... | ... | ... | ... | 3 | 3 | 5 | 2 | 5 | 6 | 13 | 11 | 24 |
| Abercromby... | ... | ... | ... | ... | 4 | 5 | 5 | 4 | 6 | 8 | 15 | 17 | 32 |
| Everton | ... | ... | ... | ... | 13 | 12 | 12 | 12 | 16 | 11 | 41 | 35 | 76 |
| Kirkdale | ... | ... | ... | ... | 5 | 2 | 5 | 2 | 6 | 4 | 16 | 8 | 24 |
| West Derby (West) | ... | ... | ... | ... | 7 | 6 | 12 | 8 | 9 | 12 | 28 | 26 | 54 |
| Toxteth | ... | ... | ... | ... | 9 | 10 | 6 | 10 | 8 | 17 | 23 | 37 | 60 |
| Walton | ... | ... | ... | ... | 1 | 4 | 7 | 7 | 3 | 5 | 11 | 16 | 27 |
| West Derby (East) | ... | ... | ... | ... | 8 | 5 | 6 | 5 | 3 | 6 | 17 | 16 | 33 |
| Wavertree | ... | ... | ... | ... | 2 | 1 | 3 | 5 | 4 | 3 | 9 | 9 | 18 |
| Toxteth (East) | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 4 | 1 | 6 | 7 |
| Garston | ... | ... | ... | ... | 3 | ... | 3 | 2 | 3 | 1 | 9 | 3 | 12 |
| Fazakerley... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 |
| Woolton | ... | ... | ... | ... | 1 | 1 | ... | 1 | ... | ... | 1 | 2 | 3 |
| No Address | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 1 |
| City | ... | ... | ... | ... | 57 | 54 | 69 | 64 | 67 | 80 | 193 | 198 | 391 |
| AGES AT DEATH. | | | | | | | | | | | | | |
| Under
1 year. | 1— | 2— | 5— | 10— | 15— | 20— | 30— | 40— | 50— | 60 & up-
wards. | All
Ages. | | |
| 34 | 44 | 77 | 52 | 48 | 44 | 27 | 27 | 10 | 8 | 20 | 391 | | |

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

VENEREAL DISEASES.

The scheme for the free treatment of Venereal Diseases which was inaugurated in 1917 under the Regulations of the Local Government Board, has proved a great success in that the majority of the clinics are working admirably and attracting large numbers of patients. The suppression of quackery under the Venereal Diseases Act, 1917, has proved of value in assisting the development of these treatment centres.

Treatment centres were inaugurated at the following institutions: Royal Infirmary, Skin Hospital, Royal Southern Hospital, Cancer and Skin Hospital, and the Medical Home, Edge Lane.

Whilst some of these centres have reached a high standard of efficiency, the Royal Infirmary has had the largest number of patients attracted to it, so much so that certain adjustments in the staff have had to be recommended. The death of Dr. Stopford-Taylor of the Skin Hospital, and the closing down of this institution, has lately thrown additional work on the Royal Infirmary, but the opening of a clinic at the Northern Hospital, and other reconstructive changes at the Southern Hospital, will, it is hoped, bring about a more equable distribution of patients; in fact, arrangements have already been entered into whereby suitable transfers from one to the other hospital can be made as circumstances require.

Although measures of diagnosis and treatment alone are contemplated at these clinics, yet it must be remembered that incidentally this will also involve prevention. Suitable cases amongst females, for example, are referred to the Medical Home, Edge Lane, which is a hostel for young girls, where the best medical treatment is combined with good moral influences and surroundings. Such cases are assisted in obtaining suitable employment on the completion of their cure.

The provision of additional Evening Clinics at the Hospital has been necessary so as to meet cases where it is impossible for the worker to get off for treatment at the usual hours. It has not been necessary so far to provide additional centres under Corporation control, the facilities and privacy to be obtained at the existing hospitals fully meeting the local needs.

It has been suggested that provision might be made for treatment at Corporation Clinics, e.g., at Tuberculosis Clinics or at Infant and Maternal Centres; this has been fully considered, and the Medical Officer is of opinion that promiscuous treatment of Venereal Diseases at the Infant and Maternal Centres would prove their destruction. These Centres fulfil the same function with regard to children as that discharged by the Medical Inspection of School Children, and are mainly preventive in character.

Auxiliary centres for continuation treatment have also been provided at the General Hospitals. At these, treatment is given under a skilled attendant, or trained nurse, subject, of course, to medical supervision. A complete and revised time table has now been issued, giving all details as to these clinics which may be required by any sufferers from Venereal Diseases.

It will be understood, as explained in former reports, that 75 per cent. of the cost of the approved scheme which the City Council are required to put into operation will be defrayed by the Local Government Board.

The existing arrangements have given most successful results, as patients are encouraged to go for treatment where they will not be singled out or be conspicuous. The existing places of medical relief to which sufferers from all other complaints go in Liverpool must primarily be concerned in assisting in the work. Obviously an establishment provided by the Corporation exclusively for Venereal Diseases would at present fail in this city, because of the fact that going to it would proclaim the nature of the patient's illness.

The examination of still-births by the City Bacteriologist shows that syphilis was the cause of the still-birth in a large proportion of cases. The results of an examination of over 600 still-births gives a positive result of syphilis infection in approximately 15 to 18 per cent. of cases. Many of the parents in these cases can be persuaded to undergo treatment at the Venereal Diseases Clinics; this work is mainly carried out by specially appointed and qualified members of the Health Staff. The influence of the midwife in attendance has also been of value.

Educational propaganda is of considerable importance, and has been undertaken in Liverpool and district by the Liverpool Medical

Institution Branch of the National Council for Combating Venereal Diseases.

The great defect in the present system is that no compulsion can be exercised on patients to complete their cure, and as already reported, large numbers of syphilitic and gonorrhœal cases give up treatment when the local manifestations of the disease have subsided and they are in comparative comfort.

The next phase in the control of these diseases will require them to be attacked upon the basis of the control of communicable diseases. Most important is the education of the public to view these diseases in the same light as are the other infectious diseases. Many objections have been raised against including these diseases amongst those which are notifiable, and certainly some of these deserve consideration. There is a growing feeling, however, that something must be done to compel attention on the part of the sufferer to his complaint and his danger to others, and that restrictions are necessary upon the diseased person whose habits of life are such as to disseminate Venereal Diseases. Powers, have, therefore, been demanded by many enlightened public bodies and medical societies.

The Medical Officer's suggestions on the above subject, which are appended, were fully endorsed by the Liverpool Health Committee, the object being to provide compulsory continuation treatment for sufferers from Venereal Disease. Each person who knows or has reasonable grounds to believe that he is suffering from Venereal Disease, would be compelled, under penalty, to consult a medical practitioner and to conform to the requirements of medical treatment. The recommendations provide for the patient's incognito being secured so long as he follows the directions of a medical practitioner until cured. Should the patient fail to place himself under or to continue medical treatment, it shall be the duty of the Medical Officer of Health to take legal proceedings against the delinquent.

There can be no doubt that measures such as these applied to the diseases in question would have good results.

A Special Memorandum on the Treatment of Venereal Diseases in this City under the Local Government Board Regulations has been issued by the Medical Officer. In this report the work done at the various treatment centres is referred to.

VENEREAL DISEASES.

Suggestions for further legislation made by the Medical Officer of Health at the request of the Chairman of the Special Venereal Diseases Sub-Committee.

1. That the Bill should be entitled "A Bill to Facilitate and Ensure Continuity of Treatment of Patients suffering from Venereal Diseases in a communicable form, and to Prevent the Spread of such Disease."

2. The preamble of the Bill to have reference to the contagious nature, and to the extent of the ravages of Venereal Disease, and to the necessity for such provision.

3. The Clauses should authorise:—

(a) The establishment and maintenance of adequate Centres, and the provision and payment for skilled medical treatment free of charge to the patients themselves.*

(b) Local Authorities to provide such suitable hospital accommodation for Venereal Diseases as may be necessary.

(c) It shall be the duty of every person who knows, or has reasonable grounds to believe, that he is suffering from a Venereal Disease, to consult a medical practitioner, and to conform with the requirements of medical treatment.

(d) No person shall knowingly infect any other person with a Venereal Disease or knowingly do or permit or suffer any act likely to lead to the infection of any other person with such a disease. Any person guilty of a contravention of this Section shall be liable to a penalty of not more than £100, or to imprisonment with or without hard labour for not more than twelve months, or to both such penalty and imprisonment.

(e) It shall be the duty of every medical practitioner who has a case of Venereal Disease under treatment to explain to the patient the nature of his illness, and the necessity for carrying out treatment until cured, and in the event of it being necessary for the patient to discontinue treatment with that practitioner, he shall be transferred to another treatment centre or medical

* This provision is already made, but that is no reason why it should not find a place in the proposed Bill, it would pave the way for the other measures.

practitioner, and the aforesaid medical practitioner shall furnish the patient with a Treatment Card (provided by the Sanitary Authority), indicating the stage of treatment reached for the information of the medical practitioner who will continue the treatment.

(f) It shall be an obligation upon the patient to continue his attendance until, in view of the medical practitioner, he is free from infection, and in the event of a patient discontinuing treatment without assigning a cause whilst, in the opinion of the medical practitioner, he is in an infectious condition, it shall be the duty of the medical practitioner to report the case to the Medical Officer of Health for the district, who shall make enquiries as to the reasons for the patient's non-attendance. In the event of no adequate reason being assigned by the patient for neglect to place himself under or to continue medical treatment, it shall be the duty of the Medical Officer of Health to lay an Information, to be heard before a Court of Summary Jurisdiction, the Court to be empowered to make an Order upon the patient to place himself under the care of the medical practitioner or to resume treatment, unless in the meantime he does so voluntarily.

(g) The terms of Sections 124 and 125 of the Public Health Act, 1897, and Section 65 of the Public Health Acts Amendment Act, 1907, shall be extended so as to apply to persons infringing the foregoing requirements.

(h) Cases shall be heard *in camera*.

(i) It shall be the duty of the parents or guardians of infected persons under 16 years of age to see that they are placed under treatment as prescribed by the Bill.

(j) The remuneration of the medical practitioner on account of the additional obligations imposed by these requirements shall be taken into consideration when fixing the stipends of the officers appointed to the Centres or Institutions controlled by the Local Authority. In the case of private medical practitioners a fee of shall be paid by the Local Authority for each certificate which the medical practitioner finds it necessary to furnish.

4. The provisions of the Bill shall apply equally to both sexes.

PENALTIES.

The penalties for a breach of the foregoing regulations shall be as follows:—

(1) For failure to inform the Medical Officer of Health a penalty of not exceeding 40s.

(2) For failure to seek medical advice, for non-attendance for treatment, or neglect to follow the instructions of his medical attendant, a penalty of not exceeding 20s. per day.

(3) The contravention of Section 3 (*d*) will carry the penalty indicated in the clause.

DEFINITION.

“ Venereal Disease ” means gonorrhoea, gonorrhoeal ophthalmia, syphilis, soft chancre, venereal warts or granuloma.

HOSPITAL ACCOMMODATION.

The accommodation provided last year amounted to 1,048 beds, and were located as follows:—

| | | | | | |
|-------------------------------|-----|-----|-----|-----|-----------|
| City Hospital, North ... | ... | ... | ... | ... | 203 beds. |
| „ South ... | ... | ... | ... | ... | 115 „ |
| „ East ... | ... | ... | ... | ... | 152 „ |
| „ Park Hill ... | ... | ... | ... | ... | 200 „ |
| „ Fazakerley Annexe ... | ... | ... | ... | ... | 208 „ |
| Deysbrook Hospital ... | ... | ... | ... | ... | 120 „ |
| David Lewis Northern Hospital | ... | ... | ... | ... | 10 „ |
| Walton Institution ... | ... | ... | ... | ... | 40 „ |
| | | | | | ----- |
| | | | | | 1,048 „ |
| | | | | | ----- |

Deysbrook Hospital belongs to the West Derby Board of Guardians, but by arrangement has been in the possession of the Corporation since October, 1914, and is used for convalescent cases.

The Committee of the David Lewis Northern Hospital have continued to place ten beds at the disposal of the Hospitals Committee for the treatment of typhoid and anthrax cases, etc., and the West Derby Board of Guardians have also continued the use of 40 beds for the treatment of measles cases, etc., at Walton Institution.

Fazakerley Hospital, which was placed at the disposal of the Military Authorities on the 14th August, 1914, has been transferred back to the Corporation, and arrangements are being made to

accommodate patients suffering from infectious diseases at the hospital Sanatorium at Fazakerley, which has also been in the possession of the Corporation as soon as the necessary furniture and equipment can be obtained. The Military Authorities, has also been transferred to the Corporation, and a limited number of tuberculosis patients have been accommodated, but some time must elapse before the whole building can be brought into use owing to the difficulty of obtaining the required furniture and equipment.

Sparrow Hall Hospital still remains in the possession of the Military Authorities.

The value of the hospitals, and the immense amount of useful work performed, is shown by the fact that no less than 6,774 patients were treated within their walls during the year. This number includes the patients admitted to the David Lewis Northern Hospital and the Walton Institution.

Arrangements have been made between the Hospitals Committee and various Local Authorities to receive cases of infectious disease from districts beyond the city boundary, namely, Sefton Rural District, Waterloo and Seaforth, Great Crosby, Little Crosby, and the Children's Convalescent Home, West Kirby.

Arrangements have also been made to deal with any case of cholera, yellow fever, or plague, which may arise in any of the neighbouring Urban or Rural Districts. A suitable charge is made in each case.

INFECTIOUS DISEASE.

The following table shows the number and nature of cases of Infectious Disease coming under the notice of the Medical Officer of Health during the year 1918:—

| YEAR—1918. | FEVER. | | Smallpox. | Scarlet Fever. | Measles and German Measles. | Diphtheria and Membranous Croup | Puerperal Fever. | Erysipelas. | Cerebro-spinal Fever. | Poliomyelitis. | Ophthalmia Neonatorum. | Anthrax. | TOTAL. |
|---------------------|---------|----------|-----------|----------------|-----------------------------|---------------------------------|------------------|-------------|-----------------------|----------------|------------------------|----------|--------|
| | Typhus. | Enteric. | | | | | | | | | | | |
| January | ... | 7 | ... | 303 | 304 | 97 | 3 | 43 | 1 | 1 | 35 | ... | 794 |
| February | ... | 4 | ... | 276 | 520 | 86 | 1 | 46 | 2 | ... | 49 | 2 | 986 |
| March | ... | 3 | ... | 300 | 1260 | 132 | 3 | 36 | 1 | 1 | 43 | 1 | 1780 |
| April | ... | 4 | ... | 235 | 1404 | 92 | 7 | 24 | 5 | ... | 56 | ... | 1827 |
| May | ... | 8 | ... | 267 | 1628 | 101 | ... | 29 | 1 | 1 | 42 | ... | 2077 |
| June | 2 | 5 | ... | 250 | 1950 | 130 | 2 | 24 | 1 | ... | 52 | 1 | 2417 |
| July | ... | 6 | ... | 170 | 792 | 79 | 4 | 20 | 1 | ... | 57 | 2 | 1131 |
| August | ... | 9 | ... | 217 | 525 | 149 | 2 | 38 | ... | ... | 62 | 1 | 1003 |
| September | ... | 10 | ... | 290 | 269 | 142 | 2 | 44 | 1 | 1 | 44 | 1 | 804 |
| October..... | ... | 7 | ... | 272 | 261 | 166 | 1 | 51 | 2 | 1 | 52 | 1 | 814 |
| November | ... | ... | ... | 223 | 202 | 127 | 2 | 58 | ... | ... | 53 | ... | 665 |
| December..... | ... | 2 | ... | 217 | 153 | 193 | 1 | 41 | 2 | 1 | 42 | 1 | 653 |
| TOTAL | 2 | 65 | ... | 3020 | 9268 | 1494 | 28 | 454 | 17 | 6 | 587 | 10 | 14951 |
| Removed to hospital | 2 | 48 | ... | 2536 | 843 | 1261 | 23 | 168 | 12 | 2 | 69 | 9 | 4973 |

The number of patients removed to hospital includes those admitted to the general hospitals, as well as those admitted to the city infectious diseases hospitals.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

The numbers of notifications received by the Medical Officer under the above Act, during the past five years, were as follows:—

| | <u>1914.</u> | <u>1915.</u> | <u>1916.</u> | <u>1917.</u> | <u>1918.</u> |
|---------------|--------------|--------------|---------------|---------------|---------------|
| January ... | 571 | 601 | 1,030 | 745 | 727 |
| February ... | 497 | 449 | 1,016 | 778 | 827 |
| March ... | 515 | 460 | 1,648 | 1,182 | 1,231 |
| April ... | 554 | 406 | 2,366 | 1,284 | 1,515 |
| May ... | 495 | 366 | 2,523 | 1,655 | 1,778 |
| June ... | 559 | 503 | 1,511 | 1,181 | 1,286 |
| July ... | 464 | 452 | 1,171 | 649 | 933 |
| August ... | 469 | 432 | 688 | 389 | 657 |
| September ... | 525 | 513 | 538 | 510 | 669 |
| October ... | 764 | 560 | 616 | 689 | 668 |
| November ... | 647 | 537 | 755 | 774 | 456 |
| December ... | 563 | 547 | 711 | 731 | 599 |
| | <u>6,623</u> | <u>5,826</u> | <u>14,573</u> | <u>10,567</u> | <u>11,346</u> |

The diseases were specified as follows:—

| | <u>1914.</u> | <u>1915.</u> | <u>1916.</u> | <u>1917.</u> | <u>1918.</u> |
|---------------------------------|--------------|--------------|---------------|---------------|---------------|
| Smallpox ... | 2 | — | 2 | 1 | 1 |
| Scarlet Fever ... | 3,567 | 2,939 | 2,067 | 2,133 | 2,713 |
| Enteric Fever ... | 176 | 149 | 86 | 81 | 65 |
| Typhus Fever ... | 4 | 14 | 4 | 1 | 4 |
| Continued Fever | 2 | 1 | 6 | — | 3 |
| Relapsing Fever . | — | — | — | 1 | — |
| Fever ... | — | 3 | — | 1 | — |
| Puerperal Fever.. | 60 | 61 | 68 | 34 | 27 |
| Diphtheria ... | 1,377 | 1,247 | 1,114 | 1,022 | 1,302 |
| Membranous Croup. 33 | ... | 19 | 14 | 25 | 31 |
| Erysipelas ... | 944 | 797 | 607 | 416 | 487 |
| Cholera ... | — | — | 1 | — | — |
| Anthrax... ... | 8 | 6 | 18 | 8 | 12 |
| Yellow Fever ... | — | — | 1 | — | — |
| Cerebro-Spinal Fever 24 | ... | 36 | 45 | 37 | 22 |
| Acute Poliomyelitis 34 | ... | 3 | 8 | 3 | 3 |
| *Measles and German Measles ... | — | — | 10,017 | 6,288 | 6,676 |
| †Ophthalmia Neonatorum ... | 392 | 551 | 515 | 516 | 587 |
| | <u>6,623</u> | <u>5,826</u> | <u>14,573</u> | <u>10,567</u> | <u>11,933</u> |

* Measles notifiable from 1st January, 1916. This accounts for the large increase in the total number of notifications.

† Notifiable since July, 1912, and from April, 1914, by Midwives as well as Medical Practitioners.

CITY HOSPITALS.

The following tables, prepared by the Medical Staff of each hospital, show the number of patients, the nature of the illness, and the results at each of the six hospitals during the year 1918:—

CITY HOSPITAL NORTH, NETHERFIELD ROAD.

Visiting Physician, Dr. R. I. RICHARDSON.

Resident Physician, Dr. T. H. DONOVAN.

| DISEASES. | Remaining
Dec. 31st, 1917. | Admitted
during the year. | Transferred from
other City
Hospitals. | Total under
Treatment during
the year. | Transferred
to Convalescent
Hospital. | Transferred
to other
City Hospitals. | Discharged
Cured. | Remaining
at end of year. | Died within
48 hours of
Admission. | Total Deaths. | Total Mortality
per cent. of
Admissions. |
|---|-------------------------------|------------------------------|--|--|---|--|----------------------|------------------------------|--|---------------|--|
| Scarlet Fever. | 92 | 869 | — | 961 | 300 | — | 534 | 93 | 4 | 34 | 3·9 |
| Typhus Fever. | — | 2 | — | 2 | — | — | 2 | — | — | — | — |
| Diphtheria ... | 21 | 190 | — | 211 | — | — | 175 | 12 | 10 | 24 | 12·1 |
| Measles..... | — | 4 | — | 4 | — | — | 4 | — | — | — | — |
| Whooping
Cough..... | 2 | — | — | 2 | — | — | 2 | — | — | — | — |
| Other Diseases | 2 | 3 | — | 5 | — | — | 4 | 1 | — | — | — |
| Isolation and
Observation
Cases | 10 | 12 | — | 22 | — | — | 18 | 4 | — | — | — |
| Totals ... | 127 | 1080 | — | 1207 | 300 | — | 739 | 110 | 14 | 58 | 5·3 |

CITY HOSPITAL SOUTH, GRAFTON STREET.

Visiting Physician, Dr. H. A. CLARKE.

Resident Physician, Dr. R. E. McBIRNIE.

| DISEASES. | Remaining
Dec. 31st, 1917. | Admitted
during the
year. | Transferred
from other
City Hospitals. | Total under
Treatment
during the year. | Transferred
to Convalescent
Hospital. | Transferred
to other City
Hospitals. | Discharged
Cured. | Remaining
at end of year. | Died within
48 hours of
Admission. | Total Deaths. | Total Mortality
per cent.
of Admissions. |
|--|-------------------------------|---------------------------------|--|--|---|--|----------------------|------------------------------|--|---------------|--|
| Scarlet Fever..... | 108 | 725 | — | 833 | 264 | — | 438 | 101 | 1 | 30 | 4·1 |
| Diphtheria | — | — | — | — | — | — | — | — | — | — | — |
| Measles | — | 178 | — | 178 | — | 5 | 148 | — | 4 | 25 | 14·0 |
| Whooping Cough... | — | — | — | — | — | — | — | — | — | — | — |
| Other Diseases..... | — | 11 | — | 11 | — | — | 9 | — | 1 | 2 | 18·1 |
| Isolation & Obser-
vation Cases | 10 | 20 | — | 30 | — | — | 21 | 9 | — | — | — |
| Totals | 118 | 934 | — | 1052 | 264 | 5 | 616 | 110 | 6 | 57 | 6·1 |

CITY HOSPITAL, FAZAKERLEY ANNEXE.

Medical Superintendent, Dr. C. RUNDLE.

Resident Physician, DR. E. E. MAWSON.

| Diseases. | Remaining
Dec. 31st, 1917. | Admitted
during the year. | Transferred
from other
City Hospitals. | Total under
Treatment dur-
ing the year. | Transferred to
Convalescent
Hospital. | Transferred
to other
City Hospitals. | Discharged
Cured. | Remaining at
end of year. | Died within
48 hours of
Admission. | Total
Deaths. | Total Mortality
per cent. of
Admissions. |
|------------------------------------|-------------------------------|------------------------------|--|--|---|--|----------------------|------------------------------|--|------------------|--|
| Scarlet Fever..... | 134 | 830 | 6 | 970 | 179 | — | 686 | 83 | 3 | 22 | 2·6 |
| Enteric Fever | — | 1 | — | 1 | — | — | — | — | — | 1 | 100·0 |
| Diphtheria | — | 111 | 4 | 115 | — | — | 80 | 24 | 1 | 11 | 9·9 |
| Measles | 2 | 42 | 5 | 49 | 1 | — | 42 | — | — | 6 | 14·3 |
| Whooping Cough ... | — | 8 | — | 8 | — | — | 7 | — | 1 | 1 | 12·5 |
| Infantile Diarrhoea | — | 28 | — | 28 | — | — | 18 | — | 1 | 10 | 35·7 |
| Other Diseases..... | 13 | 80 | 4 | 97 | 19 | — | 55 | 18 | — | 5 | 6·2 |
| Isolation and
Observation Cases | — | 31 | — | 31 | — | — | 31 | — | — | — | — |
| Totals | 149 | 1131 | 19 | 1299 | 199 | — | 919 | 125 | 6 | 56 | 4·9 |

CITY HOSPITAL, DEYSBROOK, WEST DERBY.

Visiting Physician, Dr. W. J. ROBERTSON DUNN.

| Diseases. | Remaining
Dec. 31st, 1917. | Admitted during
the year | Transferred
from other
City Hospitals | Total under
Treatment during
the year | Transferred to
Convalescent
Hospital | Transferred
to other
City Hospitals | Discharged
Cured | Remaining at
end of year | Died within
48 hours of
Admission | Total Deaths | Total Mortality
per cent. of
Admissions |
|-------------------|-------------------------------|-----------------------------|---|---|--|---|---------------------|-----------------------------|---|--------------|---|
| Scarlet Fever ... | 112 | 94 | 671 | 877 | — | 35 | 779 | 56 | — | 7 | 7·4 |

CITY HOSPITAL, PARKHILL.

Medical Superintendent, Dr. W. CRANE.

| DISEASES. | Remaining Dec.
31st, 1917. | Admitted during
the year. | Transferred from
other City Hospitals | Total under Treat-
ment during the
year. | Transferred to
Convalescent Hospital | Transferred to other
City Hospitals. | Discharged. | Remaining
at end of year. | Died within 48
hours of Admission. | Total Deaths. | Total Mortality
per cent. of
Admissions. |
|----------------|-------------------------------|------------------------------|--|--|---|---|-------------|------------------------------|---------------------------------------|---------------|--|
| Phthisis | 183 | 413 | — | 596 | — | — | 334 | 194 | — | 68 | 16·4 |

CITY HOSPITAL EAST, MILL LANE, OLD SWAN.

Visiting Physician, Dr. H. A. CLARKE.

Resident Physician, Dr. P. COTTER.

| DISEASES. | Remaining
Dec. 31st, 1917. | Admitted
during the year. | Transferred
from other
City Hospitals. | Total under
Treatment dur-
ing the year. | Transferred
to Convalescent
Hospital. | Transferred
to other
City Hospitals. | Discharged
Cured. | Remaining at
end of year. | Died within
48 hours of
Admission. | Total Deaths. | Total Mortality
per cent. of
Admissions. |
|--|-------------------------------|------------------------------|--|--|---|--|----------------------|------------------------------|--|---------------|--|
| Scarlet Fever... | 26 | 104 | 3 | 133 | 8 | — | 121 | — | 2 | 4 | 3·8 |
| Enteric Fever.. | — | 1 | — | 1 | — | — | — | — | — | 1 | 100·0 |
| Scarlet Fever &
Diphtheria... | — | 16 | 8 | 24 | — | — | 14 | — | 6 | 10 | 62·5 |
| Diphtheria | 102 | 1038 | 6 | 1146 | 15 | — | 865 | 123 | 64 | 143 | 13·7 |
| Measles | — | 2 | — | 2 | — | — | 2 | — | — | — | — |
| Other Diseases. | — | 43 | — | 43 | — | — | 24 | 10 | 5 | 9 | 20·9 |
| Isolation and
Observation
Cases..... | 13 | 11 | — | 24 | — | — | 17 | 7 | — | — | — |
| Totals..... | 141 | 1215 | 17 | 1373 | 23 | — | 1043 | 140 | 77 | 167 | 13·7 |

SANITARY ADMINISTRATION.

The number of occasions upon which the advice and assistance of the Health Department have been sought during the year was 14,346.

The District Sanitary Inspectors visit all premises where a nuisance is complained of at the earliest possible moment, and last year 20,227 nuisances were discovered as the result of complaints. Preliminary notices were served either on the owners or the occupiers to remedy 16,666 nuisances. The remaining 3,561 nuisances came within the province of other departments, and were referred to those departments to be dealt with.

The nuisances for which notices were served were referred to the Prosecuting Inspectors for re-inspection, and where necessary further proceedings were taken to cause the abatement of the nuisance.

Apart from complaints, the Inspectors in the course of house-to-house inspection discovered a large number of nuisances. A number of defects were also referred by other departments.

Preliminary notices were served on the owner or occupier in respect to 34,789 nuisances. Of these, 33,509 were re-inspected by the District Inspectors; the remainder, being in connection with ashpits or ashbins, were referred to the Ashpit Inspectors.

The number found not abated was 9,455, and statutory notices were served to remedy them. These were again re-inspected by the District Inspectors, and those found not abated were referred to the Prosecuting Inspectors for further action. In addition, all nuisances found in process of being abated, or which the District Inspector was unable to gain access to to re-inspect, were referred to the Prosecuting Inspectors.

REFERENCES FROM OTHER DEPARTMENTS.

The referenees from the other departments, numbering 18,757, mainly comprise insanitary conditions discovered by officers belonging to those departments, but with which it is not within their province to deal.

REFERENCES TO OTHER DEPARTMENTS.

The number of matters referred to other departments was 19,830.

The references to the Water Engineer comprise mainly defective fittings, resulting in waste of water; also cases in which the supply was insufficient owing to various eauses.

The referenees to the City Engineer consist principally of choked main drains and street gullies, and defective street and passage pavements; the references to the Building Surveyor concern dangerous walls, floors, roofs, &c.

NOTICES ISSUED.

The number of preliminary notiees issued was 27,605, and the number of statutory notices was 11,629.

RE-INSPECTION OF NUISANCES.

The number of nuisances referred to Prosecuting Inspectors for re-inspection was 14,265, and 51,499 visits were paid to re-inspect these nuisanees.

There are now 80,000 sanitary ashbins in use in the City, and there are still approximately 8,000 ashpits in the City.

SPECIAL VISITS.

Visits have been made to railway carriages, marine stores, &c., as far as has been possible with a depleted staff.

EXAMINATION OF CELLARS AND CELLAR DWELLINGS.

| | | | | |
|--|-----|-----|-----|-------|
| Number of inspections of street cellars ... | ... | ... | ... | 6,315 |
| „ inspections of court cellars ... | ... | ... | ... | 316 |
| „ notices issued to cease letting or occupying ... | | | ... | 141 |

VISITS AND ENQUIRIES AT INFECTED HOUSES.

| | | | |
|---|-----|-----|-------|
| Number of visits and re-visits to phthisis cases | ... | ... | 3,611 |
| „ enquiries <i>re</i> suspected smallpox contacts | ... | ... | 912 |
| „ enquiries <i>re</i> suspected typhus fever contacts | ... | ... | 465 |
| „ other enquiries | ... | ... | 364 |

The number of children excluded from attending school from houses where infectious sickness existed was 26,856.

SMOKE NUISANCES.

The number of reports of excessive smoke from manufactories was 114, and from steamers in river and docks 28.

OFFENSIVE TRADES.

There were five applications for permission to carry on offensive trades received during the year, all of which were granted.

The number of inspections of premises where offensive trades are carried on was 1,280.

KNACKER'S YARD, CARRUTHERS STREET.

Carcases of diseased horses and cattle are destroyed here under the supervision of an Inspector of the Public Health Department, in specially tested iron pans with covered lids, which have been erected for the purpose. Unsound meat is also destroyed on these premises.

The number of carcases destroyed on account of old age or minor complaints was 2,029.

INSPECTION OF STABLES AND REMOVAL OF MANURE.

Attention has been given to the inspection of stables and the necessity for the frequent removal of manure emphasised.

The number of visits to stables was 3,723, and the number of disinfections of middensteads was 8,190.

The middensteads are sprayed with lime after being emptied.

EXTERMINATION OF RATS.

A staff of rat catchers is systematically employed in the destruction of rats, and all the rats caught are taken to Charters Street Corporation Dépôt and drowned; those not sent for bacteriological examination are subsequently placed in the destructor furnace.

The number of rats caught within the City was 9,791, of which 1,090 were sent to the City Bacteriologist at the University for examination. A large number of rats were also caught on ships and about the docks and warehouses by the officers of the Port Sanitary Authority.

PRINCES DOCK AND FORD STREET MORTUARIES.

The total number of bodies deposited at these Mortuaries was 667.

CREMATORIUM.

The Crematorium is situated in Anfield Cemetery, and was opened by the Liverpool Crematorium Company in the year 1896. When the Corporation became the Burial Authority for the City, the administration was taken over in October, 1908, by the Crematorium Sub-Committee.

The number of cremations which have taken place since the opening is shown in the following table:—

| | | | |
|-----------|----|-----------|-----|
| 1896..... | 2 | 1909..... | 46 |
| 1897..... | 10 | 1910..... | 37 |
| 1898..... | 27 | 1911..... | 50 |
| 1899..... | 23 | 1912..... | 52 |
| 1900..... | 40 | 1913..... | 66 |
| 1901..... | 40 | 1914..... | 49 |
| 1902..... | 54 | 1915..... | 53 |
| 1903..... | 35 | 1916..... | 58 |
| 1904..... | 40 | 1917..... | 62 |
| 1905..... | 35 | 1918..... | 70 |
| 1906..... | 46 | | |
| 1907..... | 34 | | 961 |
| 1908..... | 32 | | |

COMMON LODGING HOUSES.

In the year 1866 there were 1,278 Common Lodging Houses on the Register. These houses were registered under the Liverpool Sanitary Act, 1844, and the Common Lodging Houses Acts of 1851 and 1853.

Bye-laws were made in 1848 and 1860 to regulate such houses. These bye-laws were repealed in 1869, when new bye-laws were made under powers given by the Common Lodging Houses Acts of 1851 and 1853, and confirmed by the Public Health Act, 1875, Sec. 326, and these remain in force at the present time.

During the year 1867 all Common Lodging Houses not having a separate day room for the use of lodgers, and all houses taking lodgers in and not having this accommodation, were registered as Sub-Let Houses. The cubic space required in Common Lodging Houses was 300 cubic feet per head at that time, as against 400 cubic feet at present.

Further powers to deal with Common Lodging Houses are given under Part 5 of the Public Health Acts Amendment Act, 1907 (adopted in 1912), Sections 69 to 75, particulars of which will be found in the Annual Report for 1913.

The Liverpool Corporation Act, 1913, Section 36 (details of which will be found in the Annual Report for 1913), deals with keepers who induce persons suffering from trachoma or other contagious diseases of the eye to become lodgers in a lodging-house.

The Annual Report for 1913 contains a list showing the number of Common Lodging Houses added to and removed from the Register since 1866.

INSPECTION OF LODGING HOUSES.

| | | |
|---|--------|-----|
| Number of houses on the Register, December 31st, 1917 | ... | 247 |
| „ houses removed from the register | ... .. | 28 |
| „ houses added to the Register | ... .. | 12 |
| „ houses on the Register, December 31st, 1918 | ... | 231 |

These houses provide accommodation for 8,966 lodgers.

There are 24 houses providing accommodation for 790 women lodgers. For details of Women's Lodging Houses see Reports for the years 1909 and 1914.

| | | | | | 1918. |
|----------------------|-----|-----|-----|-----|-------|
| Number of day visits | ... | ... | ... | ... | 7,696 |
| „ night visits | ... | ... | ... | ... | 364 |

There were 403 special visits *re* notified cases of phthisis (included in above).

Eight informations were laid against keepers for offences against the Bye-laws:—

- 2 for overerowding.
- 5 for not washing floors.
- 1 for not sweeping floors.

Convictions followed in each case.

Under the Public Health Acts Amendment Act, 1907, Sections 69 to 72, 66 houses were re-registered, and 30 deputy-keepers were registered, and the registration of one deputy-keeper was cancelled.

Since the early part of 1915 twenty of the largest Emigration Houses have been taken over by the War Office and the Admiralty for soldiers' and sailors' billets, for which purpose they were suitably equipped.

SEAMEN'S LICENSED LODGING-HOUSES.

The Corporation have made Bye-laws, with the sanction of the President of the Board of Trade, for the licensing of Seamen's Lodging Houses; under the Merchant Shipping (Fishing Boats) Act, 1883, Section 48.

Applications from the keepers of Registered Common Lodging Houses for licenses authorising the designation of such Registered Common Lodging Houses as Seamen's Licensed Lodging Houses, are infrequent, only three such licensed houses now being on the register, providing accommodation for 74 seamen.

The number of licenses granted since the adoption of the Seamen's Lodging House Bye-laws is 33.

It has not been found necessary to institute proceedings under the bye-laws in question.

Some years ago the holders of licenses to keep Seamen's Lodging Houses were authorised by the Board of Trade to board vessels and seek for lodgers, and while this privilege was granted there was an advantage in holding such a license, but that privilege being now withdrawn it does not appear that there is any advantage to the keeper of a Common Lodging House to have his premises registered as a Seamen's Lodging House, hence, probably, the small number upon the register.

HOUSES LET IN LODGINGS.

SUB-LET HOUSES.

The first bye-laws made to deal with these houses were confirmed by the Secretary of State, November, 1866, and were made under powers given by the Liverpool Sanitary Act of 1866, Section 35. Previous to the adoption of these bye-laws overcrowding was dealt with under the Nuisance Removal Act, 1855. These bye-laws were amended in 1869 under the Act of 1866, and further amended in 1885 and 1886 under the Public Health Act of 1875, Section 90.

Bye-laws were made in 1901 requiring 400 cubic feet for each adult person, and 200 cubic feet for every person below ten years of age. Prior to the adoption of these bye-laws the cubic space required for each adult was 350 cubic feet, and two children below ten years of age counted as one person. Powers were also given to deal with the non-separation of sexes in lodgers' rooms, and to enforce the cleansing of stairs and passages used in common.

These bye-laws were repealed in 1911, and new bye-laws were made giving additional powers to deal with the non-separation of sexes in tenants' and lodgers' rooms, overcrowding, and to enforce the cleansing of rooms, stairs, and passages.

Powers were also given to enforce the provision of water-closet accommodation (one water-closet for every twelve persons), the lime-washing of walls and ceilings of houses, yards and water-closets at stated intervals.

INSPECTION OF HOUSES LET IN LODGINGS.

| | | | | | |
|---|-----|-----|-----|-----|--------|
| Number of houses on the register, December 31st, 1917 | ... | ... | ... | ... | 16,635 |
| „ houses removed from the register | ... | ... | ... | ... | 60 |
| „ houses added to the register | ... | ... | ... | ... | 295 |
| „ houses on the register, December 31st, 1918 | ... | ... | ... | ... | 16,870 |

DAY VISITS :

| | | | | | | |
|-----------------------------|-----|-----|-----|-----|-----|--------|
| Number of day visits | ... | ... | ... | ... | ... | 98,062 |
| „ rooms measured | ... | ... | ... | ... | ... | 1,718 |
| „ floors found dirty | ... | ... | ... | ... | ... | 557 |
| „ stairs and passages dirty | ... | ... | ... | ... | ... | 88 |

Informations were laid for breaches of the bye-laws as follows :—

| | | | | | | |
|-------------------------------------|-----|-----|-----|-----|-----|-----|
| Not washing floors | ... | ... | ... | ... | ... | 153 |
| Not sweeping floors | ... | ... | ... | ... | ... | 100 |
| Not cleansing stairs, passages, &c. | ... | ... | ... | ... | ... | 31 |

NIGHT VISITS :

| | | | | | | |
|--|-----|-----|-----|-----|-----|--------|
| Number of night visits | ... | ... | ... | ... | ... | 19,524 |
| „ cases of overcrowding found | ... | ... | ... | ... | ... | 1,206 |
| „ rooms found overcrowded | ... | ... | ... | ... | ... | 1,249 |
| „ cases of overcrowding abated on re-visit | ... | ... | ... | ... | ... | 786 |
| „ informations laid for overcrowding | ... | ... | ... | ... | ... | 233 |
| „ convictions for overcrowding | ... | ... | ... | ... | ... | 220 |
| „ discharged | ... | ... | ... | ... | ... | 13 |

Where informations were not laid verbal cautions were given by the Inspectors.

DETAILS OF OVERCROWDING :

| | | | | | | |
|---|-----|-----|-----|-----|-----|-----|
| Number of cases of overcrowding by families occupying 1 room | ... | ... | ... | ... | ... | 198 |
| „ cases of overcrowding by families occupying 2 rooms | ... | ... | ... | ... | ... | 542 |
| „ cases of overcrowding by families occupying 3 or more rooms | ... | ... | ... | ... | ... | 466 |

NON-SEPARATION OF SEXES :

| | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Number of cases found | ... | ... | ... | ... | ... | 211 |
| „ informations laid | ... | ... | ... | ... | ... | 112 |
| „ convictions | ... | ... | ... | ... | ... | 106 |
| „ discharged | ... | ... | ... | ... | ... | 6 |

Where informations were not laid verbal cautions were given by the Inspectors.

The following table shows the number of houses let in lodgings on the register, together with the number of visits for the prevention of overcrowding, for the past 18 years:—

| Year. | No. of Houses
let in
Lodgings on
Register. | No. of night
visits for
prevention of
overcrowding. | No. of
convictions for
overcrowding. | Percentage of
convictions to
number of visits. |
|-------------------|---|--|--|--|
| 1901 | 18,917 | 17,863 | 1,351 | 7·56 |
| ¹ 1902 | 19,976 | 17,274 | 1,150 | 6·65 |
| 1903 | 21,719 | 18,439 | 1,264 | 6·85 |
| 1904 | 22,401 | 17,886 | 1,148 | 6·41 |
| ² 1905 | 20,518 | 19,193 | 1,326 | 6·90 |
| 1906 | 19,714 | 18,838 | 920 | 4·88 |
| 1907 | 19,832 | 22,982 | 962 | 4·18 |
| 1908 | 19,776 | 23,074 | 738 | 3·19 |
| 1909 | 19,654 | 23,534 | 576 | 2·44 |
| 1910 | 19,436 | 23,273 | 414 | 1·77 |
| 1911 | 18,873 | 21,788 | 526 | 2·41 |
| 1912 | 16,475 | 22,173 | 612 | 2·76 |
| ³ 1913 | 16,405 | 22,938 | 660 | 2·87 |
| 1914 | 16,492 | 24,309 | 693 | 2·85 |
| 1915 | 16,626 | 21,659 | 595 | 2·74 |
| 1916 | 16,827 | 22,199 | 636 | 2·86 |
| 1917 | 16,635 | 21,746 | 508 | 2·33 |
| 1918 | 16,870 | 19,524 | 220 | 1·12 |

¹ Garston included in the City.

² Fazakerley do.

³ Woolton, Allerton and Childwall included in the City.

CANAL BOATS ACTS, 1877 and 1884.

The Leeds and Liverpool Canal Company are the proprietors of the only canal having direct communication with Liverpool, and the length of the waterway within the City, exclusive of locks which lead to the docks, is about three miles.

The number of boats on the register is 453, and of these 403 regularly ply on the canal. It is probable that the other 50 boats have either been broken up, left the district, or have ceased to be used as dwellings, but in the absence of definite information of this the boats remain on the register.

The number of inspections of canal boats during the year was 4,105, and the condition of the boats and their occupants as regards matters dealt with in the Acts and Regulations is indicated in the following information:—

| | | | | | |
|--|-----|-----|-----|-----|-----|
| Number of New Boats registered | ... | ... | ... | ... | 2 |
| „ Boats re-registered on account of change of owners | | | | | 3 |
| „ Do., do., and Name of Boat | ... | ... | ... | | 1 |
| „ Re-registered on account of structural alterations... | | | | | 1 |
| „ Boats taken off the register | ... | ... | ... | ... | 4 |
| „ references to Education Department <i>re</i> children on | | | | | |
| Boats not attending school | ... | ... | ... | | 1 |
| „ Boats on which contraventions occurred | ... | ... | | | *38 |
| „ unregistered Boats used as dwellings | ... | ... | | | 3 |
| „ Boats with no certificates of registration on board | | | | | 7 |
| „ „ lettering, marking, etc., not legible | ... | | | | 6 |
| „ „ dirty cabins | ... | ... | ... | ... | 1 |
| „ „ leaky decks | ... | ... | ... | ... | 15 |
| „ „ defective ventilation | ... | ... | ... | | 3 |
| „ „ „ cabin floors | ... | ... | ... | | 1 |
| „ „ „ skylight | ... | ... | ... | | 1 |
| „ „ cabins overcrowded | ... | ... | ... | | 1 |
| „ „ „ indecently occupied | ... | ... | | | 2 |
| „ „ no water casks | ... | ... | ... | ... | 1 |
| „ written notices issued to owners | ... | ... | ... | | 29 |
| „ verbal notices given to owners | ... | ... | ... | | 4 |
| „ „ „ masters | ... | ... | ... | | 5 |
| „ informations laid against masters | ... | ... | ... | | 2 |
| „ convictions | ... | ... | ... | ... | 2 |

No cases of infectious sickness were reported during the year as having occurred on any canal boat visiting the district.

There are no motor propelled boats registered by this Authority.

* Of this number 6 were registered by other Authorities.

**Administration of the Factory and Workshop Act, 1901, in
connection with
FACTORIES, WORKSHOPS, WORKPLACES & HOMEWORK**

The following Tables are prepared by request of the Secretary of State:—

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors.

| Premises. | Number of | | |
|---|--------------|------------------|---------------|
| | Inspections. | Written Notices. | Prosecutions. |
| Factories
(Including Factory Laundries.) | 218 | 56 | — |
| Workshops
(Including Workshop Laundries.) | 8,505 | 830 | — |
| Workplaces
(Other than outworkers' premises in-
cluded in Part 3 of this Report.) | 556 | 11 | — |
| Total | 9,279 | 897 | — |

2.—Defects Found in Factories, Workshops and Workplaces.

| Particulars. | Number of Defects. | | | Number
of
Prosecu-
tions. |
|---|--------------------|----------|-----------------------------------|------------------------------------|
| | Found. | Remedied | Referred
to H.M.
Inspector. | |
| <i>Nuisances under the Public Health Acts :—*</i> | | | | |
| Want of cleanliness | 323 | 323 | — | — |
| Want of ventilation | 6 | 6 | — | — |
| Overcrowding | — | — | — | — |
| Want of drainage of floors | 1 | 1 | — | — |
| Other nuisances | 209 | 209 | — | — |
| +Sanitary accommodation {insufficient | 24 | 24 | — | — |
| | 255 | 255 | — | — |
| | 7 | 7 | — | — |
| <i>Offences under the Factory and Workshop Act :—</i> | | | | |
| Illegal occupation of underground bakehouses
(S. 101) | 1 | 1 | — | — |
| Breach of special sanitary requirements for
bakehouses (SS. 97 to 100) | 4 | 4 | — | — |
| Other offences
(Excluding offences relating to outwork which
are included in Part 3 of this Report). | — | — | — | — |
| Total | 830 | 830 | — | — |

* Including those specified in Sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Act Amendment Act, 1890, has been adopted by the City Council. The standard of sufficiency and suitability of sanitary accommodation for persons employed in Factories and Workshops is in accordance with the Sanitary Accommodation Order of 4th February, 1903.

3.—Home Work.

| OUTWORKERS' LISTS, SECTION 107. | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--------------------------------|-----------|---------------|-----------|--------|-------------------|-----|-----|------|------|---------------|------|------|------|--|---|------|------|--|--|--|
| NATURE OF WORK. | Lists received from Employers. | | | | | | | | | | Prosecutions. | | | | Number of Inspections of Outworkers' premises. | OUTWORK IN UNWHOLESOME PREMISES, SECTION 108. | | | OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110. | | |
| | Twice in the year. | | | | | Once in the year. | | | | | | | | | | | | | | | |
| | a Lists. | | a Outworkers. | | Lists. | a Outworkers. | | | | | | | | | | | | | | | |
| | Con-tractors. | Work-men. | Con-tractors. | Work-men. | | | | | | | | | | | | | | | | | |
| | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | | (16) | (17) | (18) | (19) | | |
| Wearing Apparel..... | 404 | 1,260 | 616 | 11 | 30 | 6 | 9 | 62 | 41 | — | 563 | — | — | — | — | — | — | | | | |
| Linen | 8 | 13 | 6 | — | — | — | — | 2 | — | — | 6 | — | — | — | — | — | — | | | | |
| Lace Curtains | — | 3 | 3 | — | — | — | — | — | — | — | 3 | — | — | — | — | — | — | | | | |
| Furniture and Upholstery... | 2 | 17 | 8 | — | — | — | — | — | — | — | 8 | — | — | — | — | — | — | | | | |
| Electro-Plate | — | 12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Brass | — | 7 | 2 | — | — | — | — | — | — | — | 2 | — | — | — | — | — | — | | | | |
| Locks | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Umbrellas | — | 6 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Paper Bags | 2 | 2 | 22 | — | — | — | — | — | — | — | 22 | — | — | — | — | — | — | | | | |
| Boxmaking | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Feather Sorting | 2 | — | 16 | — | — | — | — | 2 | — | — | 16 | — | — | — | — | — | — | | | | |
| Stuffed Toys..... | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Baskets | — | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | | | | |
| Processes incidental to above | — | 12 | 2 | — | — | — | — | 2 | — | — | 2 | — | — | — | — | — | — | | | | |
| Total | 418 | 1,340 | 675 | 11 | 30 | 6 | 9 | 68 | 41 | — | 622 | — | — | — | — | — | — | | | | |

* Several Employers give out work of more than one of the classes specified in column 1. The lists are included among those in column 2 against the principal class only, but the outworkers are assigned in columns 3 and 4 into their respective classes.

The figures in columns 2, 3 and 4 are the total number of lists (received from employers who sent them both in February and August as required by the Act) and of the entries of names of outworkers in those lists. They are, therefore, double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name is often repeated.

4.—Registered Workshops.

| Workshops on the Register (S. 131) at the end of the year. | Number. |
|--|---------|
| Workshops | 3,142 |
| Cooking Kitchens of Restaurants | 396 |
| Bakehouses | 696 |
| Total number on Register | 4,234 |

5.—Other Matters.

| Class. | Number. |
|---|---------|
| Matters notified to H.M. Inspector of Factories:—
Failure to affix Abstract of the Factory and Workshop Act (S. 133) | 14 |
| Action taken in matters referred by {
H.M. Inspector as remediable {
under the Public Health Acts, but {
not under the Factory and Work- {
shop Act (S. 5) | 31 |
| Other... .. | 31 |
| Underground Bakehouses (S. 101) :— | — |
| Certificates granted during the year | — |
| In use at the end of year | 117 |

SHOPS ACTS, 1912 AND 1913.

During the year 158 complaints have been received, relating principally to the non-closing of shops on the weekly half-holiday.

AMBULANCE AND DISINFECTING STAFF.

There have been 4,791 infectious cases removed by officers of the Ambulance Staff to the hospitals during the year.

The number of rooms stripped or sprayed was 10,012, and the number of rooms disinfected was 34,772. There were also 2,367 Library books disinfected.

The number of articles, consisting of bedding, clothing, etc., disinfected at the Disinfecting Apparatus was 150,718, and the number of articles destroyed was 120, compensation being paid for the latter in conformity with the provisions of the Public Health Act.

DISINFECTION OF BEDDING, CLOTHING, &c.

Two Disinfecting Stations have been established in the City for a number of years, each well equipped to deal with large quantities of material. The North End of the City is served by the Charters Street Station and the South End by the Smithdown Road Station. The Depot in New Bird Street is now disused. When necessary the disinfecting apparatus attached to each of the City Hospitals can be utilised.

INSPECTION OF SLAUGHTER-HOUSES, &c.

The number of visits to slaughter-houses made by Meat Inspectors was 5,619; to butchers' shops 38,356.

The number of visits to fish and fruit shops made by Fish and Fruit Inspectors, 59,792.

Special visits were also paid to premises of Food Hawkers, Jam and Pickle factories, and Knackers yards.

ANIMALS KILLED IN THE CITY SLAUGHTER-HOUSES AND
DEAD MEAT IMPORTED FOR SALE.

The number of fat cattle from local dairies slaughtered in the City during the year was 4,471. The number of animals killed at the City Slaughter-houses and carcasses imported for sale was as follows:—

| | | | Killed. | | | Imported. |
|--------|-----|-----|---------|-----|-----|-----------|
| Beasts | ... | ... | 23,556 | ... | ... | 21,142 |
| Sheep | ... | ... | 150,338 | ... | ... | 64,700 |
| Lambs | ... | ... | 19,122 | ... | ... | 73,725 |
| Calves | ... | ... | 13,637 | ... | ... | 1,309 |
| Pigs | ... | ... | 14,987 | ... | ... | 2,715 |
| Horses | ... | ... | 648 | ... | ... | — |

There were also 72,113 boxes and bags of various organs and cut-up pieces imported for sale.

CENTRAL SLAUGHTER-HOUSES.

The position in regard to the slaughtering of animals throughout the City is practically the same as at the close of last year.

In the interests of public health, the Health Committee have during the last 10 or 15 years declined to renew or transfer licenses for private slaughter-houses, and a gradual decline in the number of the eminently unsuitable places has, therefore, taken place. The central abattoir and the associated offensive trades remain in the condition which has been so frequently commented upon. Every effort is made to palliate the nuisances inseparable from the conduct of businesses of this kind in situations which are cramped, confined, and unsuitable, but these efforts result in very little real good, as the nature of the operations must necessarily cause nuisance, when the premises are situated as these are. The subject has been fully dealt with in previous reports.

MEAT AND OFFAL FOUND TO BE UNFIT FOR HUMAN FOOD.

| | | | | | UNWHOLESOME MEAT. | | | | UNWHOLESOME OFFAL. | | | |
|-----------------|-----|-----|-----|-----|-------------------|-------|------|------|--------------------|-------|------|------|
| | | | | | Tons | cwts. | qrs. | lbs. | Tons | cwts. | qrs. | lbs. |
| Beef | ... | ... | ... | ... | 111 | 18 | 0 | 16 | 44 | 17 | 2 | 21 |
| Mutton and Lamb | ... | ... | ... | ... | 8 | 13 | 2 | 24 | 11 | 17 | 3 | 7 |
| Veal | ... | ... | ... | ... | 4 | 4 | 2 | 4 | 0 | 1 | 0 | 12 |
| Pork | ... | ... | ... | ... | 9 | 12 | 3 | 27 | 1 | 6 | 1 | 10 |
| Goats | ... | ... | ... | ... | 2 | 13 | 0 | 4 | 0 | 2 | 3 | 22 |
| Horse Flesh | ... | ... | ... | ... | 18 | 13 | 2 | 3 | -- | — | — | — |
| Total | ... | ... | ... | ... | 155 | 15 | 3 | 22 | 58 | 5 | 3 | 16 |

Refuse, consisting of Pigs' intestines, etc., 36,742 lbs.

CARCASES OF DISEASED OR INJURED ANIMALS SURRENDERED
OR SEIZED.

The number of carcasses surrendered to, or seized by the Medical Officer of Health and Inspectors, was 1,512. Of these 287 were Tuberculous.

FISH, POULTRY, &c., FOUND TO BE UNFIT FOR HUMAN FOOD.

The amount of fish found to be unfit for human food was 187½ tons, in addition there were 159 bags of shellfish.

There were 2,476 head of poultry, 1,155 head of game, and 13,305 rabbits and hares; also 12 wild birds.

Amongst other various articles of food unfit for use were 1,167 tins of condensed milk, 1,199 tins of fish, 14,600 oysters, 53,404 eggs, 9,886 lbs. of cheese, 491 lbs. of egg pulp, 496 lbs. of rolled oats, 86 lbs. of cake, and 112 lbs. of dripping.

FRUIT, VEGETABLES, &c., FOUND TO BE UNFIT FOR HUMAN FOOD.

The amount of unsound fruit destroyed was 14 tons, and unsound vegetables 245 tons.

DAIRIES, COWSHEDS AND MILKSHOPS.

There is no change in the method of procedure respecting the licensing of cowsheds and the registration of dairies, milkshops and milkstores.

STATISTICS RESPECTING COWSHEDS.

| | 1918 |
|---|-------|
| Number of applications to keep cows on premises not previously licensed | 1 |
| „ „ granted | 1 |
| „ cows applied for | 2 |
| „ „ granted | 2 |
| „ applications for transfer to fresh tenants of cowsheds previously licensed | 25 |
| „ „ granted | 25 |
| „ „ to keep more cows than the number for which the license was originally granted | 1 |
| „ „ granted | 1 |
| „ additional cows applied for | 3 |
| „ „ granted | 3 |
| „ Cowsheds on the register 31st December, 1917 ... | 393 |
| „ „ „ „ 1918 ... | 339 |
| „ cows licensed to be kept within the city area ... | 5,487 |

COWSHED INSPECTION.

| | 1917. | 1918. |
|--|-------|-------|
| Number of Inspections of Cowsheds | 3,976 | 2,923 |
| „ found Incorrect | 118 | 38 |

Twenty-three notices were issued to occupiers directing their attention to minor contraventions of the regulations.

The number of cowsheds in the City during the years 1909 to 1918, inclusive, together with the number of cows licensed to be kept, and the

number of applications for new cowsheds, are shewn in the following table:—

| Years | | Cowsheds | | Cows | | Applications. |
|-------|-----|----------|-----|-------|-----|---------------|
| 1909 | ... | 466 | ... | 6,778 | ... | 2 |
| 1910 | ... | 447 | ... | 6,691 | ... | 4 |
| 1911 | ... | 436 | ... | 6,428 | ... | 0 |
| 1912 | ... | 432 | ... | 6,589 | ... | 3 |
| 1913 | ... | 415 | ... | 6,431 | ... | 4 |
| 1914 | ... | 429 | ... | 6,734 | ... | 21 |
| 1915 | ... | 423 | ... | 6,460 | ... | 7 |
| 1916 | ... | 383 | ... | 6,043 | ... | 8 |
| 1917 | ... | 393 | ... | 6,516 | ... | 3 |
| 1918 | ... | 339 | ... | 5,487 | ... | 1 |

MILKSHOPS.

| | | | | | 1917. | 1918. |
|--|-----|-----|-----|------|-------|-------|
| Number of applications for registration | ... | ... | ... | ... | 69 | 45* |
| „ „ granted | ... | ... | ... | ... | 68 | 44 |
| „ „ withdrawn | ... | ... | ... | ... | 1 | 0 |
| „ „ in abeyance | ... | ... | ... | ... | 0 | 1 |
| Number of Milkshops on the register at the end of 1914 | ... | | | | | 797 |
| „ „ „ „ | | | | 1915 | ... | 770 |
| „ „ „ „ | | | | 1916 | ... | 794 |
| „ „ „ „ | | | | 1917 | ... | 740 |
| „ „ „ „ | | | | 1918 | ... | 720 |

* Forty-one of these applications were transfers.

DAIRIES AND MILKSHOPS.

| | | | | | 1917. | 1918. |
|--|-----|-----|-----|-----|-------|-------|
| Number of Inspections of Dairies and Milkshops | ... | | | | 6,300 | 5,537 |
| „ found correct | ... | ... | ... | ... | 38 | 3 |

Twenty-five caution notices were issued to occupiers of milkshops, and two notices were sent to farmers for minor contraventions of the regulations.

ICE CREAM MAKERS AND VENDORS.

The usual inspections have been made of the premises utilised by street traders solely for manufacturing ice-cream.

The dwellings which these street traders occupy have also been kept under observation, and in no instance during the past year has it been found that ice-cream has been made or stored in or about these dwellings.

A systematic inspection has also been made of shopkeepers' premises which are used for the manufacture or sale of ice-cream.

During the past year the making of ices containing milk or sugar was prohibited by the Food Controller, water ices only being allowed, with the result that most premises ceased to carry on this business.

| | <u>1917.</u> | <u>1918.</u> |
|---|--------------|--------------|
| Number of premises under inspection ... | 1,030 | 1,006 |
| „ visits made ... | 2,005 | 1,777 |
| „ caution notices issued ... | 12 | 3 |

PIGGERIES.

During the year special attention has been given to the keeping of pigs on suitable premises in continuation of the policy adopted last year with a view to the encouragement of food production as recommended by the Order in Council dated 10th January, 1917.

At the beginning of 1917 there were 136 piggeries licensed to keep 1,760 pigs. There are now 185 piggeries licensed to keep 2,943, an increase of 1,183 pigs during the past two years.

In 1918, 46 applications involving the keeping of 450 pigs were made; 31 of these applications were granted, 13 refused, and 2 are in abeyance. 691 inspections were made during the year.

TUBERCULOSIS AND THE MILK SUPPLY.

LIVERPOOL CORPORATION ACT, 1900.

The examination of cows and cowsheds within the City has been duly carried out throughout the year, and all cases of sickness found by the Leavelookers reported to the Veterinary Department. In cases where the cows are reported to be suffering from any disease of the udder, the Medical Officer of Health directs that the animal be submitted to veterinary examination, and if it is found to be affected with disease likely to be inimical to the public health, the milk supply from the affected cow is stopped.

The following table shows the number of cases notified and visits made by the Veterinary Inspectors to cowsheds within the City boundary during the past 5 years:—

| YEAR. | No. of Visits
to Town
Cowsheds. | No. of Cases
notified
by Owners. | Other
Visits. | No. of Cows
examined. | No. of Cows
Suspicious
of Tuber-
culosis of
the Udder. | No. of
Convictions
for Offences
under
the Act. |
|--------------|---------------------------------------|--|------------------|--------------------------|--|--|
| 1914 | 386 | 92 | 294 | 4043 | 21 | — |
| 1915 | 153 | 38 | 115 | 1781 | 15 | — |
| 1916 | 216 | 22 | 194 | 3232 | 11 | — |
| 1917 | 64 | 11 | 53 | 896 | 2 | — |
| 1918 | 105 | 2 | 103 | 1570 | 2 | — |
| Totals | 924 | 165 | 759 | 11522 | 51 | — |

MILK SUPPLIED FROM OUTSIDE THE CITY BOUNDARIES.

Under the Liverpool Corporation Act, 1900, Inspectors systematically visit various places supplied with milk from the country, including the railway stations and hospitals, and there take samples. These samples are then submitted to bacteriological examination. Should they be found to contain tubercle bacilli (the germs of consumption) the Veterinary Superintendent, or his assistant, accompanied by the Medical Officer of Health or his representative, and furnished with an order signed by a magistrate resident within the county from which the milk is consigned (as prescribed by the Act), visit the farm or dairy and examine the stock therein.

The following table shows the number of visits to farms outside the City boundary during the past 5 years: —

| YEAR. | No. of Farms Visited. | No. of Re-Visits to Farms | Total No. of Visits to Farms. | No. of Cowsheds Examined. | No. of Cows Examined. | No. of Cows Suspicious of Tuberculosis of the Udder | No. of Convictions for Offences under the Act. | No. of Orders Prohibiting Sale of Contaminated Milk within the City |
|-----------|-----------------------|---------------------------|-------------------------------|---------------------------|-----------------------|---|--|---|
| 1914 | 21 | 8 | 29 | 70 | 1302 | 6 | — | — |
| 1915 | 21 | 16 | 37 | 75 | 1265 | 3 | — | — |
| 1916 | 22 | 14 | 36 | 68 | 1394 | 5 | — | — |
| 1917 | 17 | 2 | 19 | 53 | 898 | 10 | — | — |
| 1918 | 10 | 1 | 11 | 14 | 449 | 9 | — | — |
| Totals... | 91 | 41 | 132 | 280 | 5308 | 33 | — | — |

DETAILS OF SAMPLES OF MILK OBTAINED FOR CHEMICAL ANALYSIS.

| | 1917. | 1918. |
|--|-------|-------|
| Number of Samples purchased on week-days in Town... | 437 | 463 |
| „ Informations | 51 | 70 |
| „ Samples taken at Railway Stations on week-days | 197 | 136 |
| „ Informations | 5 | 7 |
| „ Samples purchased on Sundays in Town ... | 147 | 113 |
| „ Informations | 24 | 16 |
| „ Samples taken at Railway Stations on Sundays | 159 | 161 |
| „ Informations | 3 | 1 |
| „ Samples taken at City Hospitals | 298 | 178 |
| „ Informations | 3 | — |
| „ Samples taken at Corporation Infant Welfare Centres | 123 | 98 |
| „ Informations | — | — |

MARGARINE ACT.

| | 1918. | 1917 |
|--|-------|-------|
| Number of Visits to Wholesale Dealers in Margarine ... | 151 | 44 |
| „ Visits to Shops | 3,793 | 3,681 |
| „ Informations | — | — |

SPECIAL EXAMINATIONS.

The total number of samples submitted during 1917 and 1918 for special examination was 74 and 28, respectively.

SUMMARY OF SAMPLES SUBMITTED FOR ANALYSIS DURING THE YEARS 1917 AND 1918.

| Year. | INFORMAL SAMPLES. | | | | FORMAL SAMPLES. | | | | | |
|-------|-------------------|-----------------|--------------|-------------|-----------------|-----------------|--------------|-------------|-------------------|--------------------|
| | Number taken. | Number genuine. | Adulterated. | | Number taken. | Number genuine. | Adulterated. | | Number cautioned. | Informa-
tions. |
| | | | Schedule A. | Schedule B. | | | Schedule A. | Schedule B. | | |
| 1917 | 516 | 493 | 22 | 1 | 2,655 | 2,391 | 170 | 94 | 50 | 93 |
| 1918 | 381 | 356 | 19 | 6 | 2,443 | 2,141 | 232 | 70 | 168 | 96 |

SUMMARY OF SAMPLES IN WHICH LEGAL PROCEEDINGS WERE INSTITUTED DURING THE YEAR ENDING
DECEMBER 31st, 1918, TOGETHER WITH RESULT.

| No. of Infor-
mations. | Nature of Samples. | Nature of Offence. | RESULT OF LEGAL PROCEEDINGS. | | | | | Costs. |
|---------------------------|--------------------|--|-------------------------------|--|--|-------------------|------------------|--------|
| | | | No. of con-
vic-
tions. | No.
with-
drawn on
payment
of costs. | No.
with-
drawn
and
dismissed
without
costs. | Fines | | |
| 13 | Milk | Deficient in cream | 8 | 3 | 2 | £ s. d.
47 0 0 | £ s. d.
6 7 6 | |
| 20 | " | Deficient in cream and adulterated with
water | 13 | 2 | 5 | 85 0 0 | 7 12 0 | |
| 54 | " | Adulterated with water | 50 | 0 | 4 | 441 0 0 | 27 8 6 | |
| 1 | " | Refusing to sell | 1 | 0 | 0 | 5 0 0 | — | |
| 5 | Skimmed milk | Adulterated with water | 5 | — | — | 37 0 0 | 2 12 6 | |
| 1 | Buttermilk | Adulterated with water and not buttermilk | 1 | — | — | 5 0 0 | 0 10 6 | |
| 1 | " | Adulterated with water | 1 | — | — | 10 0 0 | 0 10 6 | |
| 1 | Dried milk | Consisted of dried separated milk | — | 1 | — | — | 0 10 6 | |
| 96 | | | 79 | 6 | 11 | £630 0 0 | £45 12 0 | |

SUMMARY OF SAMPLES IN WHICH LEGAL PROCEEDINGS WERE INSTITUTED DURING THE YEAR ENDING
DECEMBER 31st, 1917, TOGETHER WITH RESULT.

| No. of Informations. | Nature of Samples. | Nature of Offence. | RESULT OF LEGAL PROCEEDINGS. | | | | |
|----------------------|--------------------------|---|------------------------------|---|--|----------|-------------------|
| | | | No. of Convictions. | No. with-
drawn on
payment
of costs. | No. with-
drawn and
dismissed
without
costs. | Fines. | Costs. |
| 34 | Milk | Deficient in cream | 19 | 11 | 4 | £ 51 0 0 | £ s. d.
16 6 0 |
| 6 | „ | Deficient in cream and adulterated with water | 5 | 0 | 1 | 18 0 0 | 3 14 6 |
| 42 | „ | Adulterated with water | 30 | 6 | 6 | 99 0 0 | 21 1 0 |
| 1 | „ | Containing dirt | — | — | 1 | — | — |
| 2 | Skimmed milk | Adulterated with water | 2 | — | — | 2 0 0 | 1 1 0 |
| 1 | „ „ | Adulterated with water and containing dirt | 1 | — | — | 3 0 0 | 0 10 6 |
| 3 | Buttermilk | Adulterated with water | 1 | 2 | — | 3 0 0 | 1 11 6 |
| 2 | Self-raising flour | Containing excess of Calcium Sulphate | — | 2 | — | — | 1 1 0 |
| 1 | Ground Gelatine | Containing 15 % wheat flour | — | 1 | — | — | 0 10 1 6 |
| 1 | Yorkshire Pudding Powder | Containing 21·6 % of Calcium Sulphate ... | — | — | 1 | — | — |
| 93 | | | 58 | 22 | 13 | £176 0 0 | £45 16 0 |

FERTILISERS AND FEEDING STUFFS ACT, 1906.

On 1st January, 1907, a Fertilisers and Feeding Stuffs Act, which replaced the old Act of 1893, came into operation.

Under it the City Analyst was appointed official agricultural analyst, and the three Inspectors under the Sale of Food and Drugs Act were appointed official samplers.

A certain remuneration was agreed to in respect of the work done under the Act.

The total number of samples procured during the year 1917 was 17; and in 1918 the number was 11.

POISONS AND PHARMACY ACT, 1908.

The Poisons and Pharmacy Act, 1908, came into operation on the 1st April, 1909.

The object of the Act is to regulate the sale of certain poisonous substances, and to amend the Pharmacy Acts. It is fully referred to in the Annual Report for 1909.

The numbers of licenses renewed under this Act were 24 in 1917, and 18 in 1918.

REPORT OF CITY BACTERIOLOGIST, 1918.

BY PROFESSOR J. M. BEATTIE.

The work of the department has been carried out as usual during the year in spite of the depletion of the staff, and the number of examinations made has been increased from 18,138 in 1917 to 19,331 in 1918.

In addition, a considerable amount of extra work has been undertaken for the naval and military authorities, especially for the hospitals and camps in connection with the Mersey defences and the naval centres in Liverpool. The various Medical Boards, Ministry of National Service, and the Ministry of Pensions, have also made calls on the Department.

The Head of the Department has been the officer in charge of cerebro-spinal fever in the areas of Liverpool, Birkenhead, Southport, St. Helens, and the Isle of Man, and he has also had charge of the bacteriological work in connection with the Seaforth Contact Centre, where all contacts from a large part of the Western Command were dealt with. The following is a brief account of the ordinary work of the Department during the year.

(a) WATER.

Monthly examinations alone were made during the year, and 34 samples from the Vyrnwy and Rivington outlets at Prescott, from the George Holt, John Holmes, and Dudlow Lane Wells, were examined. The general results were satisfactory, though in some months the bacterial count was above the average and *B. coli* were present in 20 c.c. of the water. The results are shown in Table I. During the present year more extensive examinations are being made (both daily and monthly samples being a routine procedure).

TABLE I.

| Where taken | Average
bacteria
per c.c. | Occasions in which <i>B. coli</i> were present in c.c. | | | | | | |
|------------------------|---------------------------------|--|----|----|----|----|----|----|
| | | 100 | 80 | 60 | 40 | 30 | 20 | 10 |
| Vyrnwy Aqueduct ... | 11 | 2 | 4 | — | — | — | 4 | — |
| George Holt Well ... | 36 | 1 | 1 | 1 | 3 | — | 2 | — |
| John Holmes Well ... | 38 | 1 | — | 1 | 2 | — | 1 | — |
| Dudlow Lane Well ... | 10 | 1 | 1 | 1 | 3 | — | — | — |
| Rivington Aqueduct ... | 17 | 3 | 5 | — | — | — | 4 | — |

(b) MILKS AND OTHER FOODSTUFFS.

These numbered 798, and were made up as under:—

(1) *For Health Committee.*

| | Samples. |
|--|----------|
| Fresh Milks (untreated, sterilised or pasteurised) ... | 579 |
| Condensed Milks | 20 |
| Evaporated Milks | 3 |
| Bread | 8 |
| Chocolate | 2 |
| Margarine | 1 |
| Fat Compound | 1 |
| Tinned Meat | 3 |
| Tinned Salmon | 4 |
| Oysters | 6 |
| Mussels | 6 |
| Sausages | 10 |
| Brawn | 7 |
| Ham | 4 |
| Black Pudding | 4 |
| Saveloy | 1 |
| Pig's Cheek | 3 |
| Ice Cream | 1 |
| | — 663 |

(2) *For Port Sanitary Authority.*

| | |
|------------------------|------|
| Condensed Milks | 24 |
| Tinned Beef | 15 |
| Tinned Salmon | 12 |
| Tinned Fruits | 8 |
| Tinned Tomatoes | 1 |
| Tinned Sausages | 1 |
| | — 61 |

(3) *For Outside Authorities.*

| | |
|-----------------------|------|
| Fresh Milks | 68 |
| Butter | 2 |
| Shrimps | 3 |
| Lard Compounds | 1 |
| | — 74 |
| | 798 |

MILK.—Of the samples of milk examined, 30 gave definite evidence of the presence of *B. tuberculosis*, and most samples showed the presence of *B. coli*—evidence of manurial contamination in .1 or .01 c.c., in a few it was present in .001 c.c. In a small proportion the *B. enteritidis sporogenes* was also present. In a proportion of cases there was microscopical and even naked-eye evidence of dirt, but the general rule was that obvious dirt was absent.

A special investigation of commercial pasteurised milk and of milk from the Harthill Infant Welfare Centre was undertaken for the Local Government Board. A report on this investigation was made to the Board through Dr. Hope. In general, the conclusions arrived at were as follows:—

1. With regard to the milk prepared for infant feeding at the Harthill Infant Welfare Centre, the samples showed a very low bacterial count; in fact, much below what is generally regarded as a milk of a high grade of purity, and there was an entire absence of *bacillus coli* which shows that the milk is handled under conditions of cleanliness both as to its collection and storage. One must, therefore, regard this milk from a bacteriological standpoint as most satisfactory.

2. In marked contrast with the above, the special investigation of commercially pasteurised milk prepared by certain milk purveyors in the City showed a very high bacterial count, and the presence of *B. coli* in all the samples, and the results, which were repeated several times, proved these milks to be highly unsatisfactory as compared with the milks specially prepared for the feeding of infants and young children by the Corporation.

OTHER FOODSTUFFS.—Of the ordinary specimens brought on behalf of the Health Committee the majority were free from serious contamination. Food-poisoning bacteria were not found in any. Thus, of the condensed milks 12 were sterile; only 2 contained *B. coli*. The evaporated milks were sterile. Several samples of tinned meats, brawn, ham, sausages, etc., contained *B. coli* and putrefactive bacilli. The oysters and mussels were quite satisfactory.

Specimens from the Port Sanitary Authority were not so satisfactory, but it should be pointed out that many of these were condemned by the Medical Officers and Inspectors, and the examination generally

supported these officers. Thus, of the 24 samples of condensed milk, all showed marked bacterial contamination. Of the 15 samples of tinned beef, three gave evidence of the presence of putrefactive bacteria, and three of an infection with Staphylococci. In nine of the tinned salmon putrefactive bacilli were present, but there were no *B. coli* and no food-poisoning bacteria. Of the tinned fruits, six were sterile and two showed *B. coli* and other bacteria. The tomatoes were sterile and the sausages showed both *B. coli* and *B. enteritidis sporogenes*.

(c) INFECTIVE DISEASES.

1. Anthrax—

| | | | | | Positive. | Negative. |
|-----------------|-----|-----|-----|-----|-----------|-----------|
| Blood from Cows | ... | ... | ... | | 4 | 0 |
| Meal | ... | ... | ... | ... | 0 | 12 |
| Beans | ... | ... | ... | ... | 2 | 0 |
| Hides | ... | ... | ... | ... | 0 | 12 |
| Wool | ... | ... | ... | ... | 1 | 3 |
| Hay | ... | ... | ... | ... | 0 | 4 |
| Sheepskins | ... | ... | ... | ... | 0 | 8 |
| Shaving Brushes | ... | ... | ... | ... | 1 | 1 |
| Tooth Brush | ... | ... | ... | ... | 0 | 1 |

The meal, beans and hay were examined in an attempt to trace the source of the animal infection.

| | | | | | Negative. | Positive. |
|------------------------------------|-----|-----|-----|-----|-----------|-----------|
| 2. Diphtheria | ... | ... | ... | ... | 102 | 409 |
| 3. Typhoid Fever | ... | ... | ... | ... | 104 | 56 |
| 4. Dysentery and Paratyphoid Fever | ... | ... | ... | ... | 117 | 6 |
| 5. Tuberculosis—Sputum | ... | ... | ... | ... | 1,999 | 275 |
| Animal specimens | ... | ... | ... | ... | 5 | 3 |
| 6. Rabies | ... | ... | ... | ... | 3 | 0 |
| 7. Cerebro-spinal Meningitis | ... | ... | ... | ... | 35 | 4 |
| 8. Glanders | ... | ... | ... | ... | 1 | 0 |

It is satisfactory to note that the medical practitioners in the City are making more and more use of the laboratory for the examination of material from infectious diseases. Of the 1,999 specimens of sputum sent for examination for *B. tuberculosis*, a considerable proportion come from the City practitioners, and the same is true of the swabs from suspected cases of diphtheria.

(d) PLAGUE.

No cases of plague occurred in the City during the year, and no infected rats were found. The following table shows the number of rats examined each month. Both naked-eye and microscopical examinations have been made in every case.

EXAMINATION OF RATS DURING THE YEAR 1918.

| | | | | | Port. | Town. | Total. |
|-----------|-----|-----|-----|-----|------------|-------|--------|
| January | ... | ... | ... | ... | 519 | 90 | 609 |
| February | ... | ... | ... | ... | 574 | 113 | 687 |
| March | ... | ... | ... | ... | 549 | 131 | 680 |
| April | ... | ... | ... | ... | 631 | 88 | 719 |
| May | ... | ... | ... | ... | 499 | 68 | 567 |
| June | ... | ... | ... | ... | 883 | 145 | 1,028 |
| July | ... | ... | ... | ... | 376 | 83 | 459 |
| August | ... | ... | ... | ... | 533 | 94 | 627 |
| September | ... | ... | ... | ... | 511 | 111 | 622 |
| October | ... | ... | ... | ... | 461 | 73 | 534 |
| November | ... | ... | ... | ... | 602 | 70 | 672 |
| December | ... | ... | ... | ... | 544 | 24 | 568 |
| Totals | ... | ... | ... | ... | 6,682 | 1,090 | 7,772 |
| | | | | | + 20 mice. | | |

(e) VENEREAL DISEASES.

The examinations are tabulated as under:—

| | | | | | Treatment
Centre. | Medical
Practitioners |
|---------------------------------|-----|-----|-----|-----|----------------------|--------------------------|
| Spirochaetes—1st Quarter | ... | ... | ... | | 1 | 1 |
| 2nd Quarter | ... | ... | ... | | — | — |
| 3rd Quarter | ... | ... | ... | | — | — |
| 4th Quarter | ... | ... | ... | | — | — |
| Gonococci—1st Quarter | ... | ... | ... | | 18 | 17 |
| 2nd Quarter | ... | ... | ... | | 5 | 16 |
| 3rd Quarter | ... | ... | ... | | 22 | 25 |
| 4th Quarter | ... | ... | ... | | 25 | 11 |
| Wassermann Reaction—1st Quarter | ... | ... | ... | | 288 | 140 |
| 2nd Quarter | ... | ... | ... | | 297 | 192 |
| 3rd Quarter | ... | ... | ... | | 226 | 70 |
| 4th Quarter | ... | ... | ... | | 291 | 135 |
| Total | ... | ... | ... | ... | 1,173 | 607 |

| Other Examinations :— | | | | | Quarters. | | | |
|-----------------------------------|-----|-----|-----|-----|-----------|------|------|-----------------|
| | | | | | 1st. | 2nd. | 3rd. | 4th. Total. |
| Still Births | ... | ... | ... | ... | 59 | 71 | 63 | 90 283 |
| Still Births (Maternity Hospital) | | | | | 12 | — | — | — 12 |
| Ophthalmia Neonatorum | | | | ... | 33 | 51 | 44 | 45 173 |
| Military | ... | ... | ... | ... | 16 | 97 | 96 | 45 254 |
| Naval | ... | ... | ... | ... | 15 | 35 | 19 | 43 112 |
| Fluid | ... | ... | ... | ... | — | 1 | — | — 1 |
| Urine | ... | ... | ... | ... | — | 1 | — | — 1 |
| Cerebro (Spinal Fluid) | ... | ... | ... | ... | — | 1 | — | — 1 |
| | | | | | | | | <hr/> 837 <hr/> |

Of these 3,796 specimens, no less than 60 per cent. were positive. When it is considered that the great majority of the specimens are sent from patients who have no definite symptoms, or whose symptoms are uncertain, this high proportion of positive cases gives some idea of the prevalence of the disease, and the seriousness of the problem. My work on stillbirths is confirmatory of all my previous observations that from 15 to 18 per cent. of these are due to syphilis. This year 283 specimens were examined, and the percentage of positive cases is between 17 and 18 per cent. The work on the venereal diseases section of my department is increasing almost every week, and the examinations are becoming more complex and more prolonged. Evidence is definite that the work must be done with extreme care and with very full controls if serious errors in diagnosis are not to be made. In all doubtful cases it is our practice to ask for further specimens for re-examination under different conditions of treatment, etc. This work therefore requires very thorough and careful supervision.

MISCELLANEOUS.—This group includes examination of tumours, urines, nasal secretions, blood for malaria, etc., disinfectants, etc., the preparation of autogenous vaccines, etc., for hospitals and medical practitioners in the City.

These may be divided thus :—

| | |
|--|-----|
| Hospitals | 782 |
| Medical Practitioners | 154 |
| Vaccines | 350 |
| Disinfectants, water, etc., for various firms | 720 |

Shipping Companies, etc.

(One disinfectant for Port Sanitary Authority).

SUMMARY OF EXAMINATIONS.

| | |
|-----------------------------------|-----|
| Waters | 225 |
| Milks and other Foodstuffs | 798 |

INFECTIOUS DISEASES.

| | |
|-------------------------------------|--------|
| Anthrax | 49 |
| Diphtheria | 3,102 |
| Typhoid Fever | 104 |
| Dysentery, Paratyphoid Fever | 117 |
| Tuberculosis | 2,004 |
| Rabies | 3 |
| Cerebro-Spinal Meningitis | 35 |
| Plague (Rats) | 7,792 |
| Venereal Diseases | 3,796 |
| Miscellaneous | 1,306 |
| Total | 19,331 |

In addition to the above, a considerable amount of work has been undertaken on cerebro-spinal meningitis, dysentery, typhoid fever, syphilis, ringworm, etc., for the Military and Naval Authorities.

THE GLANDERS AND FARCY ORDER OF 1907.

During the year 1918 the City was again entirely free from the disease.

Immediate notification of suspected glanders is received either from the owner, police, or the veterinary surgeon who may be called in to the case. As a further safeguard, the Veterinary Superintendent or his assistant examine the lungs of all equines sent to the horse slaughterer's yard (there is only one in the City for this purpose), and it is by these inspections that unreported cases can be discovered.

This precaution is also taken to ensure owners being notified of the existence of the disease which may be in a latent state, and to detect unscrupulous persons who may not conform to the requirements of the Order.

The following table gives the number examined during the past three years:—

| Year | Lungs Examined. | Affected. | Not Affected. |
|------|-----------------|-----------|---------------|
| 1916 | 2,130 | — | 2,130 |
| 1917 | 2,685 | — | 2,685 |
| 1918 | 2,338 | — | 2,338 |

INSPECTION OF HORSE AUCTIONS.

The sale yards in the City have been regularly visited and the animals exposed for sale therein examined for the presence of any contagious disease, under the Glanders Order of 1907, Parasitic Mange Order, 1911 and 1918, and the Epizootic Lymphangitis Order, 1905; also as to their fitness to travel in accordance with the Animals (Transit and General) Order of 1912, and the Protection of Animals Act of 1911.

2,524 animals were examined, of which three were found affected with parasitic mange.

MARKET INSPECTION.

The following number of animals were examined at the Liverpool Cattle Market during the year 1918. The figures for 1917 are also given for comparison :—

| | 1917. | 1918. |
|----------------------|--------|--------|
| Cattle | 3,976 | 6,142 |
| Sheep | 24,707 | 21,076 |
| Pigs | ... | 3,292 |
| Other Animals | 39 | 12 |
| Total | 28,722 | 30,522 |

THE PARASITIC MANGE ORDER OF 1911 AND AMENDMENTORDER OF 1918.

Under the above Orders, immediate notification of actual or suspected cases of mange in horses is received from the owner, police, horse slaughterers, or veterinary surgeons, who may be called in to the case. The suspected animals are then examined by the Veterinary Superintendent, or his assistant, also the entire stud when at rest. Affected animals are immediately isolated and kept under observation until the disease has disappeared. Thorough disinfection of the premises, harness, utensils, feeding troughs, etc., is carried out under the supervision of the Veterinary Department.

Ten prosecutions were instituted and eight convictions obtained.

The total number of outbreaks on premises where the disease was found to exist was 105, and the number of visits made to these premises was 1,575.

The following table shows the figures for 1918, with the previous four years for comparison :—

| Year. | Number of Animals
and
Carcases Examined. | Number
affected
or suspected. | Recovered. | Died or
Slaughtered. |
|-------|--|-------------------------------------|------------|-------------------------|
| 1914 | 8,443 | 284 | 214 | 70 |
| 1915 | 9,885 | 322 | 241 | 81 |
| 1916 | 8,016 | 303 | 230 | 73 |
| 1917 | 7,173 | 309 | 200 | 109 |
| 1918 | 5,864 | 196 | 142 | 54 |

THE ANTHRAX ORDER OF 1910.

Twenty-five cases of suspected anthrax were reported, all of which were submitted to microscopical examination. In four cases the disease was found to exist, and subsequently confirmed by the Board of Agriculture and Fisheries. The carcasses were destroyed. Fifty-six in-contact animals were also examined and kept under observation.

THE RABIES ORDER OF 1897.

Three cases of suspected rabies were dealt with under this Order. They were examined by the officers of the Veterinary Department and by the Corporation Bacteriologist, and certified to be free from rabies.

EXAMINATION OF HORSES FOR HUMAN FOOD.

There were six shops in the City licensed under the Horse Flesh Act of 1889 for the sale of horse beef for human food at the end of the year.

Premises have been set apart at three slaughter-houses, viz., Carruthers Street, Foley Street, and High Street, Wavertree, for the slaughter of the horses and dressing of the carcasses.

The animals deemed suitable for human consumption are first submitted to veterinary examination, and after slaughter the carcasses are examined by the Inspectors of the Medical Officer of Health, and also in many cases by the Veterinary Inspector.

664 animals were examined, of which 563 were passed for human consumption and 101 condemned.

LIVERPOOL DOGS' HOME AND CATS' SHELTER.

During the year 1918 the Liverpool Dogs' Home received from the police and otherwise stray dogs to the total of 2,691. There were also brought by their owners to be destroyed 1,169 dogs, and in addition the Home continued its systematic collection of unwanted dogs from owners' houses, and thus brought in 647 more. The total claimed by owners and sold to good homes was 763, and the surplus, namely, diseased, dangerous and valueless animals, were humanely destroyed, the number being 3,722. Dogs boarded for their owners numbered 329.

In 30 cases the dependants of men on military or naval service paid the cost of their Dog Licence in small instalments, the Licence being promptly bought when the payments were made up.

It is hoped to make arrangements for the instalment of an Electric Lethal Chamber, which provides the most rapid, effective, and therefore humane method of ending life which has yet been discovered.

The Liverpool Cats' Shelters received, mainly at their Central and Branch Depôts, 8,220 cats during 1918, of which 2,653 were diseased or injured. New homes were found for eight, and five were claimed, while the enormous balance, being entirely unwanted, were humanely destroyed by chloroform. Arrangements are also being made here for the installation of an Electric Lethal Chamber.

THE LIVERPOOL ANIMALS' HOSPITAL.

The year 1918 was the first complete year for this institution. The number of attendances recorded on horses, donkeys, dogs, cats, rabbits and birds of several kinds was 1,368. Of the cases traceable to their conclusion 73 per cent. were cured. Twelve accident cases were brought to the hospital at all hours. It is to be remembered that all this work is done for the animals of those who cannot afford to engage a veterinary surgeon, and who would therefore in most cases go altogether without skilled attention but for the hospital.

The Animals' Ambulance responded to 141 calls during the year.

FOOD CONTROL WORK.

The large amount of time and attention given by the Officers of the Department in reference to the rationing of food supplies under the Food Controller's Orders, as well as the supervision of premises of firms engaged in carrying out army contracts, may be judged by the following statistics, viz. :—

SUMMARY OF WORK PERFORMED IN CONNECTION WITH
THE VARIOUS FOOD ORDERS DURING THE YEAR 1918.

| | | | | | | |
|--|-----|-----|-----|-----|-----|-------------|
| Number of visits to shops | ... | ... | ... | ... | ... | 199,389 |
| Number found correct | ... | ... | ... | ... | ... | 197,624 |
| Number found incorrect (mainly the absence of Notices,
minor irregularities in respect of Food Registers, and
failing to submit Returns) | ... | ... | ... | ... | ... | 1,765 |
| Number of complaints investigated | ... | ... | ... | ... | ... | 3,838 |
| Number of visits in connection with New Business
Applications | ... | ... | ... | ... | ... | 1,525 |
| Number of enquiries in respect of Ration Books | ... | ... | ... | ... | ... | 2,648 |
| Number of Applications dealt with for additional Rations
on medical grounds | ... | ... | ... | ... | ... | 2,275 |
| Total number of prosecutions | ... | ... | ... | ... | ... | 417 |
| Number dismissed or withdrawn | ... | ... | ... | ... | ... | 35 |
| Number of convictions | ... | ... | ... | ... | ... | 382 |
| Total amount of fines | ... | ... | ... | ... | ... | £2,044 11 0 |
| Value of Sugar ordered to be forfeited and subsequently
disposed of by the Food Control Committee | ... | ... | ... | ... | ... | £500 0 0 |

PARLIAMENTARY POWERS.

A Report has been approved by the Health Committee recommending that Parliamentary Powers be obtained to deal with the following matters:—

On the occasion of an outbreak of Infectious Disease, to prevent children assembling in Sunday Schools, Cinemas, and other places of amusement. ^{Infectious Disease.}

For the removal, to a suitable hospital, of persons about to be discharged from Goals, Poor Law Institutions, or Asylums, and who are at the time under medical treatment for Venereal Disease in a communicable form.

To ensure continuity of treatment and prevention of this disease.

To prohibit infected persons, or persons living in houses in which there is a case of infectious disease, carrying on a business connected with food.

To medically examine inmates of Common Lodging-houses where infectious disease is supposed to exist.

It is desirable that Section 44 of the Liverpool Corporation Act, 1902, should be extended so as to place a similar obligation to that contained in the Section on all Food Purveyors who sell in the street. ^{Street Traders of Food.}

Difficulties have arisen in respect to the service of notices, and the provisions of Section 267 of the Public Health Act, 1875, should be made applicable. ^{Vermineous Children.}

Additional powers are required for the cleansing of verminous parents where there is evidence of the children being found constantly verminous.

This Section should give the necessary power of entry, and provide a penalty in case of obstruction.

Additional powers are required to ensure that houses infested with vermin should be cleansed by the occupier, or by the owner if the house is vacant.

Ashbins and
Ashpits.

Section 18 of the Liverpool (Consolidation) Bill should include provision that ashbins shall be kept in good repair.

Proceedings under this Section will be facilitated if the following words were inserted after the words Medical Officer, "his Deputy, or other Officer appointed to take proceedings under the Public Health Acts."

Powers are required to make provision that on the certificate of the Medical Officer of Health the abolition of ashpits shall be enforced and ashbins provided in their place.

Drains and
Water-
closets.

To provide a penalty against the occupier of a house for wilful damage to the drains, water closet, or the improper use of same.

Cellar
Dwellings.

The procedure in respect to the serving of notices under the Liverpool Corporation (General Powers) Act, 1908, Section 28, should follow the provisions of Section 267 of the Public Health Act, 1875.

Insanitary
Property.

Powers are required to prohibit the re-letting of houses scheduled as insanitary; and to prevent the erection of undesirable buildings on the sites of insanitary property in those cases where compensation *has not* been paid.

Powers to facilitate the reconstruction, alteration, or demolition of property which is rendered insanitary by defective arrangements of outbuildings, and which reasonably admit of improvement by structural alteration.

Smoke
Prevention.

Foreign-going steamers whilst in dock to be amenable to the provisions of Local Smoke Prevention Act.

Keeping of
Cattle.

The occupier of a cowshed within the City to be required to notify the Medical Officer of Health in the event of sickness or injury amongst the cattle when the emergency slaughter of cattle for human food has become necessary.

To provide penalty for contravention of Sections 46 and 47 of the Liverpool Improvement Act, 1867, relating to the inspection of licensed premises.

In the event of the Milk and Dairies (Postponement) Act being Milk Supply repealed, all existing powers of the local Acts with regard to milk supply must be renewed.

The Clauses relating to the prevention or contamination of ice-cream be made applicable to the sale of milk in passage ways.

GENERAL.

Powers are also required to deal with the following:—

Injury to health caused by unnecessary noise.

Noise.

Location and control of stables.

Stables.

Authorisation of proceedings to suppress serious nuisance prior to confirmation by the Health Committee.

Nuisance.

Control of premises where food is prepared and stored, in order to Food. minimise waste of foodstuffs. For the protection of foodstuffs from contamination by dust, vermin, etc.

For the control of Fried Fish Shops.

Further control of the slaughtering of animals and of the method of handling dead meat.

Better sanitary provision, water supply, sinks, etc., in houses let in Water Lodgings, Offices, Workshops. Supply, etc.

For marking specifically "Drinking" tap direct from the main in dwelling-houses, factories, workshops, offices, etc.

To provide that the Houses let in Lodgings shall be inspected and Houses let in approved prior to registration, as in the case of Common Lodging-Lodgings-houses.

Regulating the hours of employment of Young Persons.

Employment of Young Persons.

Registration of Undertakers and the control of Private Mortuaries.

Private Mortuaries.

Registration and control of Nursing Homes and Lying-in Homes.

Nursing Homes.

For the control of premises used as Grottoes, in which animals, e.g., Grottoes. donkeys, monkeys, etc., are temporarily housed.

HOUSING.

History of
Housing in
Liverpool.

The history of the Housing Question in Liverpool illustrates in the clearest way the value of comprehensive schemes and vigorous action, and the uselessness of half measures. It is not so far removed as to dim the value of its lessons.

Spurred by necessities which existed in no other City, the Corporation obtained Parliamentary Powers adequate to secure the demolition of dwellings which, from the point of view of health and decency, were so constructed and situated as to be unfit for human habitation, and to replace these dwellings by a certain number of houses, upon the same sites, but planned and constructed in conformity with modern sanitary requirements.

The good constructive results which have followed upon the sweeping away, without leaving a trace of evils which public opinion had too long tolerated, are patent to everybody.

Type of
House.

The special type of insanitary dwelling dealt with from time to time by the Housing Committee of the City Council is fully described in the Medical Officer of Health's Report of 1911; this Report also explains how it came about that Liverpool was burdened with such a large amount of insanitary property.

Presentments
under Local
Acts.

During the years 1865 to 1904 almost all operations affecting insanitary dwellings, or insanitary areas, were carried out under Local Acts. This procedure implied the "Presentment" of the properties in question to the Grand Jury at Quarter Sessions, and their decision was final. Eighteen presentments were made by the Medical Officer of Health under the Local Act of 1864, in respect to approximately 6,300 houses, as being unfit for human habitation, and these were subsequently demolished.

Unhealthy
Areas.

Representa-
tions under
Housing
Acts.

In 1901 the first Official Representation under the Housing of the Working Classes Act was made, and up to the present time 18 Unhealthy Areas, containing a total of 2,454 houses, have been scheduled under this Act.

In these official representations there were also included properties other than dwelling-houses required for the purposes of the general scheme.

In addition to the work of the Housing Committee under the Local and General Acts, commercial enterprise and the needs of public and private companies have assisted in the abolition of insanitary property. Private Improvements.

Of the eighteen unhealthy areas, eleven have been finally disposed of, and 1,206 dwellings erected on the sites. Unhealthy Areas dealt with.

The following table illustrates the effect of the reconstruction of these areas, and the comparative vital statistics of the past and present, but it must always be remembered that it is only those who have been dispossessed from the insanitary dwellings who are catered for, and, with negligible exceptions, no other tenants are accepted.

| | Average of
3 years in
Insanitary
Areas. | Average of
3 years
(1916-7-8) after
reconstruction. | Average of
3 years
(1916-7-8)
whole City. |
|-------------------------|--|--|--|
| Birth Rate | 45·0 | 40·1 | 23·8 |
| Death Rate | 37·0 | 26·6 | 18·0 |
| Infant Death Rate | 259·0 | 162·0 | 119·0 |
| Phthisis Rate | 4·0 | 1·9 | 1·7 |
| Zymotic Rate | 4·0 | — | 2·0 |

The following seven areas are now being dealt with:—

| Date of
representation. | Area. | Original
Popula-
tion. | Number
of
existing
houses | Number
of
houses
occupied. |
|---|--------------------------|------------------------------|------------------------------------|-------------------------------------|
| March, 1907 | Beau Street | 532 | 128 | 2 |
| June, 1912 | Prince Edwin Street..... | 737 | 170 | 107 |
| June, 1912 | Rathbone Street | 445 | 125 | 21 |
| June, 1912 | Mason Street..... | 301 | 91 | 9 |
| June, 1912 | Saltney Street | 558 | 124 | 108 |
| Liverpool Housing Con-
firmation Order, 1914 | Dublin Street | | | |
| June, 1912 | Blenheim Street | 230 | 48 | 48 |
| June, 1912 | Penrhyn Street | 488 | 116 | 26 |
| | | 3,291 | 802 | 321 |

Unhealthy
Areas not
completed.

The present position in regard to these areas is as follows:—

BEAU STREET AND PRINCE EDWIN STREET AREAS.

In view of certain necessary street improvements these areas are receiving the careful consideration of a Special Committee consisting of Members of the Health and Housing Committees.

The whole of the Beau Street area has been acquired, and the greater portion of the Prince Edwin Street area has also been purchased. Of the 298 dwellings on these two areas, 189 are unoccupied, and more or less derelict.

BLLENHEIM STREET, AND PENRHYN STREET AREAS.

There are 125 dwellings on this area, and of this number 104 are unoccupied. With the exception of two cases the whole of this area is in possession of the Corporation.

MASON STREET, SALTNEY STREET, AND DUBLIN STREET, BLLENHEIM STREET, AND PENRHYN STREET AREAS.

In respect of these five areas, plans for re-building have been submitted to and approved by the Housing Committee.

Of the 346 dwellings on these areas, 188 are unoccupied. One half of the site of the Blenheim Street area is vacant land, the properties having been demolished.

The greater portion of the properties in Mason Street and Penrhyn Street areas has been acquired, also the vacant land included in the Blenheim Street area.

In view of the provisions of the new Housing Bill, further negotiations are pending in regard to the uncompleted cases in the remaining areas.

WOOLTON DISTRICT.

The Corporation are under an undertaking to carry out a Housing Scheme in the added area of Woolton, and which, but for the War, would have been already carried out.

In the Liverpool (Extension) Order, 1913, an Agreement with the Much Woolton Council, dated March 4th, 1913, is confirmed, which contains this Clause:—

“ At least one-third of the area bounded by Vale Road, Castle Street, Quarry Street, and the Woolton Gas Works in the added area shall be included in a Scheme of Improvement to be carried out by the Corporation within six years from the commencement of the Order, viz., 9th November, 1913.”

In addition to the unhealthy areas previously mentioned, there still remain to be dealt with, approximately, 2,585 houses, mainly of the back-to-back type, the majority of these being court houses; of these approximately 930 houses are so grouped together as to be suitable for being dealt with as “ unhealthy areas.” The remainder would require to be dealt with by Closing Orders under Part 2 of the Housing of the Working Classes Act, 1890.

UNHEALTHY AREAS.

The following groups of houses are suitable for inclusion in areas which might be dealt with under Part 1 of the Housing of the Working Classes Act, etc., 1909:—

| Group of houses. | Approximate population. | Total number of Courts. | Total number of Court Houses, and contiguous front houses. |
|-----------------------------|-------------------------|-------------------------|--|
| Bancroft Street | 207 | 7 | 46 |
| Burlington Street | 927 | 24 | 205 |
| Comus Street | 148 | 2 | 33 |
| Gomer Street | 576 | 16 | 128 |
| Great Richmond Street | 126 | 3 | 28 |
| Hopwood Street | 270 | 8 | 60 |
| Lawrence Street | 270 | 8 | 60 |
| Leeds Street | 85 | 1 | 19 |
| Mount Vernon View | 234 | 4 | 52 |
| Rankin Street | 261 | 9 | 58 |
| Roscoc Lane | 346 | 6 | 77 |
| Slade Street | 274 | 5 | 61 |
| Whitley Street | 459 | 13 | 102 |
| | 4,183 | 106 | 930 |

Sutton Trust The Trustees of the Sutton Trust may probably deal with the removal of some of these insanitary houses, but at the present the position in regard to that probability is indefinite.

All the above houses are at present occupied, and plans illustrating some of these groups of houses are shewn.

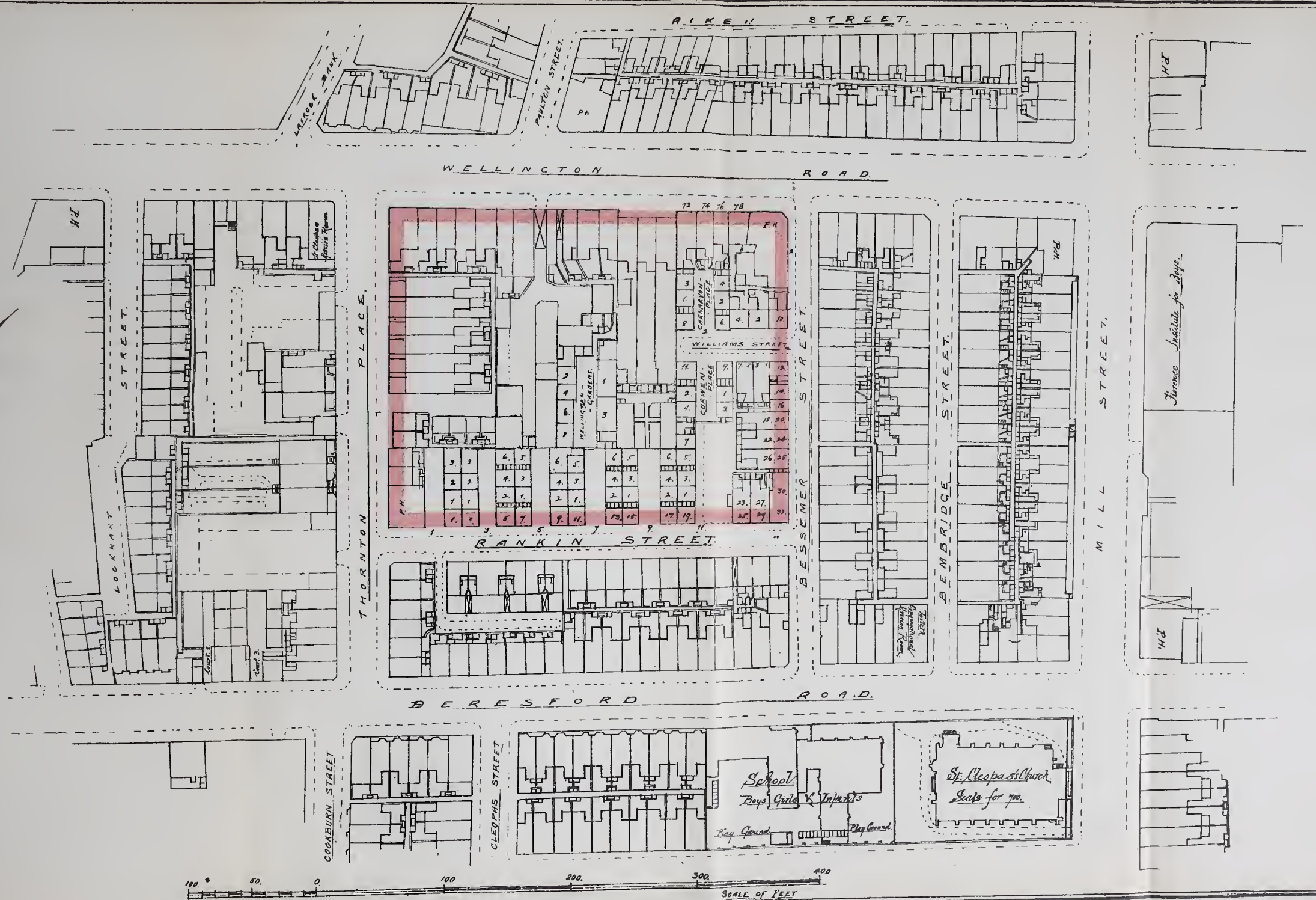
It is anticipated that Bancroft Street area will be dealt with by the extension of adjoining works, an application having been made to the City Council to close Bancroft Street.

Houses which will benefit by structural alteration. Apart from these considerations there are whole series of streets as well as scattered dwellings, of quite another category, which, whilst not coming within the schedule of houses unfit for human habitation, are, to a greater or lesser extent, insanitary, and urgently call for, and readily admit of re-construction, notably in connection with out-buildings and immediate structural surroundings. Some of the streets running from Netherfield Road to Great Homer Street serve as illustrations. Nor must the point be lost sight of that, far removed from any questions of insanitation, there are many streets of houses, erected some 50 or 60 years ago, which require and admit of modernizing to meet ordinary standards of comfort and convenience, some of them are the property of the Corporation, and might, with great advantage, be modernized or re-constructed, a policy which has been adopted with great success in many central residential areas in London.

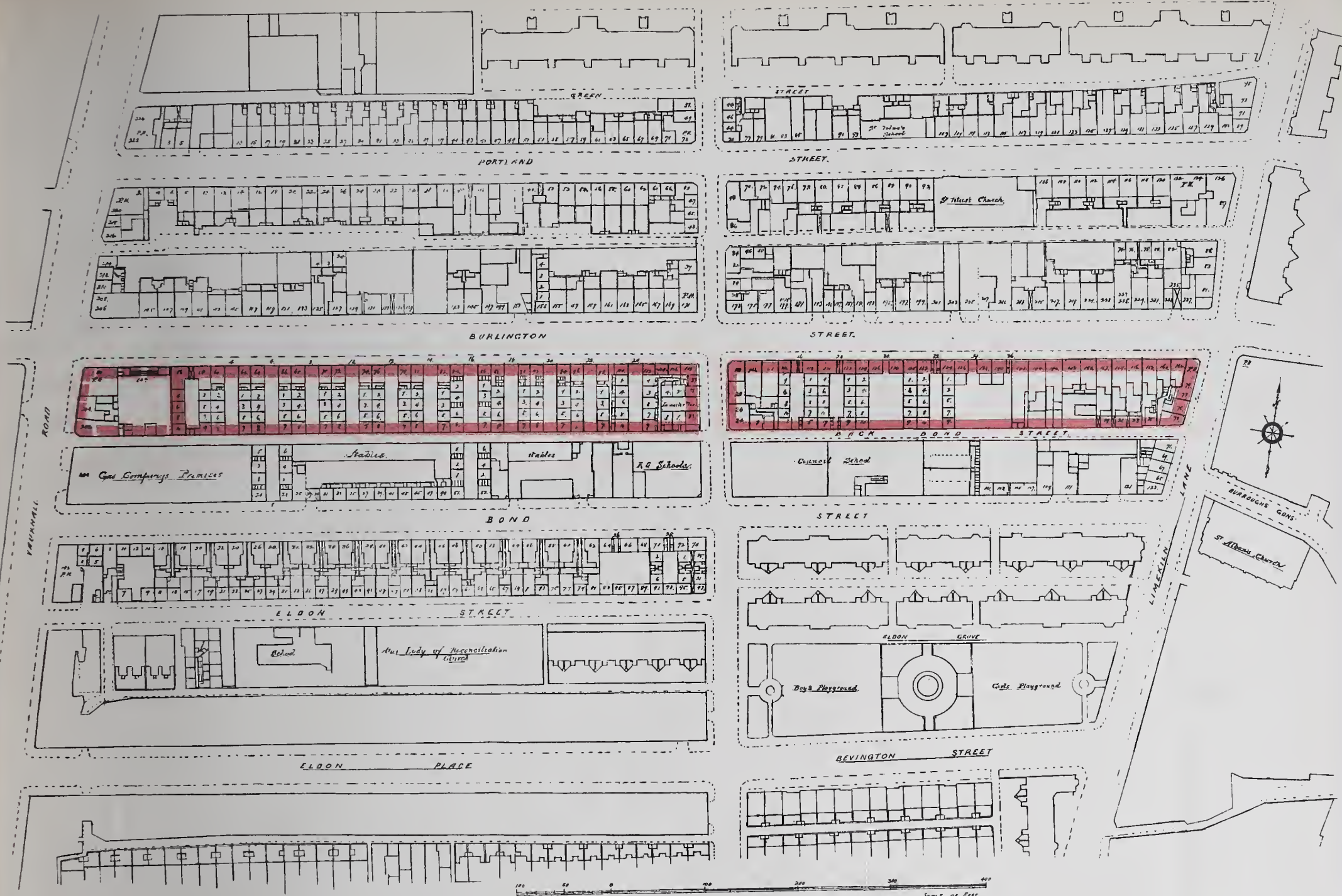
Obstructive Areas. In this connection it is necessary to take into account that there are important central sites which in the past have been partially dealt with as insanitary areas, but which are still occupied by congested, ill-constructed obstructive dwellings, disused or serving very little useful purpose, interspersed with the former sites or derelict remains of slum-dwellings which have been removed by the Housing Committee, such of the properties as are still used as dwelling-houses being the resort of the low section of the community "known to the Police." These sites block the way of improved communication between important districts, Baptist Street area and Beau Street area furnish illustrations

From time to time comprehensive schemes to deal with these areas have been under consideration by the various Committees whose functions involve sections of the subject, and have been postponed:

UNHEALTHY AREA: RANKIN STREET.







UNHEALTHY AREA—BURLINGTON STREET.

these schemes if given effect to would result in many civic advantages, e.g., in opening up confined and insanitary areas, which cannot be satisfactorily dealt with in any other way, in facilitating access between the main thoroughfares of the Central and North-Eastern parts of the City.

The shortage of houses of every kind, wholesome and unwholesome, is no longer an infliction upon one class of the community, but, to a certain extent is felt by all. ^{Shortage of houses.}

The causes are obvious, building operations have been suspended for five years; during the five years prior to the War the number of houses built, within the City, including those built by the Corporation, was 6,738, as compared with 1,541 erected during the five years 1914 to 1918.

In December, 1914, there were 2,270 unoccupied houses within the City, this number had been reduced to 375 in December, 1918, and many of the latter were closed because they were unfit for habitation.

Turning, however, to the definite question of construction it may be taken that, as indicated in a memorandum prepared by the Housing Committee, some 6,000 dwellings will be required for the large section of the public comprised within the wider definition of the "Working Classes." As it is neither desirable nor practicable to attempt to make this provision in the built-up parts of the City, provision must be sought in the careful selection of suitable sites in the outskirts, where, after the War, building will extend. These dwellings afford scope for variety and character of building, but where the tenement system is thought desirable the advantages of communal kitchens or dining-rooms as well as communal laundries, etc., will no doubt be borne in mind.

Procedure raises two preliminary considerations of vital importance; the first is, profiting by the lessons of the past, to ensure by such means as are thought fit that there shall be no more lost opportunities in planning and laying-out the areas, not only in complete conformity with the requirements of modern sanitation in their most liberal interpretation, but also in conformity with any Municipal improvement which the proposals may render possible; the second, which is equally important, is the provision of facilities of transport, adequate in regard to economy, frequency, and speed between the homes and places of employment. ^{Building in Suburbs.}

Satisfactory as the results have been from the policy of rehousing the dispossessed upon the sites of their former dwellings, enquiries show that prior to the War there was a gradual movement of the population from the more congested parts of the City to the outskirts, and no doubt a further impetus would be given if improved facilities for transit were available.

Within certain hours the Railway Companies provide reduced fares, this principle, applied to the Tramways, would help in removing the people from the heart of densely built up parts of the City to the suburbs.

The City of Sheffield has obtained powers to run a proper and sufficient Tramway Service for the use of artizans, mechanics, and daily labourers, at such hours, not being later than 7 a.m. or earlier than 6 p.m., at fares not exceeding one halfpenny for every mile or portion of that distance.

The Medical Officer of Health in his Annual Report for the year 1899, made the following observation:—

“ There are many instances in which small congested insanitary
 “ areas are being gradually replaced, by the extension of business
 “ premises, warehouses, etc. This growth of commercial require-
 “ ments has in some cases entirely altered the character of the
 “ districts, and while it has enhanced the value of the sites for
 “ business purposes, has lessened its suitability for dwellings. It
 “ may, no doubt, be physically possible to erect suitable cottages,
 “ each with through ventilation, and open yard space, upon one of
 “ these sites, yet the fact that warehouses tower above them,
 “ obstructing ventilation, and curtailing the amount of light and
 “ sunshine, render them far less desirable than cottages of equal
 “ character in the outskirts.

“ The Medical Officer of Health would again take occasion to
 “ express his belief that the best interests of the labouring classes
 “ —those for whose benefit the work is undertaken—will be served
 “ by housing them, so far as circumstances will permit, in more
 “ open localities in the suburbs. It is generally considered that the
 “ dwellings intended to replace the insanitary ones should be
 “ provided upon the original sites; or in the immediate vicinity, in

“ order that the occupants may not be removed to a distance from
 “ their work. It is incorrect, however, to assume that the
 “ occupants of congested insanitary areas *are* living near their
 “ work; as often as not they work at very considerable distances
 “ away, and hence the removal from those districts would in many
 “ cases be advantageous not only from the sanitary, but from the
 “ business point of view. The projected advances in the means of
 “ locomotion, between the centre and the outskirts of the City will
 “ shortly place within the reach of the labouring classes the advan-
 “ tages of living away from the congested centre of the City, and
 “ at the same time, being within easy and cheap access of their work
 “ wherever it may be.”

In 1906, urging the same point, the following recommendations were made:—

“ In reference to the question of erecting dwellings for the dis-
 “ possessed, away from the congested areas, where so much space
 “ is absorbed by offices, warehouses, and other commercial
 “ buildings, it is plain that sooner or later a limit to the possibili-
 “ ties of rebuilding in the densely populated parts of the City, will
 “ be reached, and the necessity for the surplus population going
 “ elsewhere will arrive.

“ It must be remembered that the dispossessed are among the
 “ most prolific section of the population, and increase very rapidly.

“ Various areas in the more open outskirts of the City present
 “ facilities for labourers' dwellings, both as regards site, elevation,
 “ and proximity to Churches, Chapels, Schools, and shops of the
 “ class used by the labouring population and their families, as
 “ well as by reason of the great facilities for transport to the work-
 “ places which are afforded by the Tramway Service, or by Rail.

“ These sites are superior in every way from a health point of
 “ view to any of the sites in the more densely populated centres.”

Following upon the Recommendations of the Medical Officer of Health the Housing Committee expressed the following view:—

“ The Committee consider for the present, at any rate, their
 “ work must be confined to Housing the dispossessed within a
 “ reasonable distance from their work; they are, however, strongly

“ of opinion that it would be to the material advantage of a
“ considerable section of the labouring classes who are about to be
“ displaced, if they and their families could be housed in the
“ suburbs.

“ From the sanitary point of view there can be no two opinions
“ on this point.”

The Reconstruction Committee, operating in conjunction with the Housing Committee, have had under consideration several sites in the suburbs for the purpose of erecting suitable dwellings, and the City Council have now decided to proceed with the erection of the dwellings upon three of these sites. It is proposed to build upon the basis laid down by the Local Government Board, and so obtain the special financial assistance offered by the Government, and referred to in the Board's Circular Letter, dated 18th March, 1918.

RE-HOUSING.

The number of dwellings provided by the Corporation up to the present is 2,863, their situations and dates of opening are as follows:—

| Situation. | Date
Opened. | Number of
Tenements. |
|---------------------------------------|----------------------|-------------------------|
| St. Martin's Cottages | 1869 | 124 |
| Victoria Square | 1885 | 270 |
| Juvenal Dwellings | 1891 | 101 |
| Arley Street | { 1897 }
(1902/3) | 46 |
| Gildart's Gardens | { 1897 }
1904 | 229 |
| Dryden Street | 1901 | 181 |
| Kempston Street | 1902 | 79 |
| Kew Street | 1902/3 | 114 |
| Adlington Street Area | 1902/3 | 272 |
| Stanhope Cottages | 1904 | 60 |
| Mill Street | 1904 | 55 |
| Hornby Street | { 1904 }
1906/7 | 449 |
| Clive Street and Shelley Street | 1905 | 84 |
| Eldon Street | 1905 | 12 |
| Upper Mann Street | 1905/6 | 87 |
| Combermere Street | 1909 | 49 |
| Burlington Street | 1910 | 114 |
| Saltney Street | 1911 | 48 |
| Grafton Street | 1911 | 60 |
| Bevington Street Area | 1912 | 218 |
| Northumberland Street Area | 1913 | 68 |
| St. Anne Street Area | 1914 | 72 |
| Gore Street | 1916 | 24 |
| Jordan Street | 1916 | 31 |
| Sparling Street | 1916 | 16 |
| Total | — | 2,863 |

DESCRIPTION OF TENEMENTS.

| | | | | | |
|--|-----|-----|-----|-----|-------|
| Number of 1 roomed dwellings... | ... | ... | ... | ... | 193 |
| Number of 2 roomed dwellings... | ... | ... | ... | ... | 1,283 |
| Number of 3 roomed dwellings... | ... | ... | ... | ... | 1,105 |
| Number of 4 roomed dwellings... | ... | ... | ... | ... | 282 |
| | | | | | 2,863 |
| Number of self-contained dwellings (included in above) | ... | | | | 79 |
| Number of shops... | ... | ... | ... | ... | 32 |

RENTALS.

The rentals of the tenements vary from 1s. 9d. to 5s. 6d., and those of the self-contained cottages from 6s. to 7s. per week.

CORPORATION TENEMENTS.

VITAL STATISTICS.

Comparative Table.

ALL DWELLINGS.

| | | | | |
|-----------------|-----|-----|-----|--------|
| Population 1913 | ... | ... | ... | 10,223 |
| Population 1914 | ... | ... | ... | 10,545 |
| Population 1915 | ... | ... | ... | 11,393 |
| Population 1916 | ... | ... | ... | 11,334 |
| Population 1917 | ... | ... | ... | 11,897 |
| Population 1918 | ... | ... | ... | 12,139 |

| | 1913. | | 1914. | | 1915. | | 1916. | | 1917. | | 1918. | |
|---------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. |
| Births | 590 | 57.7 | 601 | 56.9 | 524 | 45.9 | 462 | 46.7 | 462 | 38.8 | 424 | 34.9 |
| Deaths | 284 | 27.7 | 304 | 28.8 | 307 | 26.9 | 327 | 28.8 | 259 | 21.7 | 358 | 29.4 |
| Infantile Mortality | 86 | 145.7 | 106 | 176.3 | 95 | 181.2 | 75 | 162.3 | 70 | 151.5 | 73 | 172.1 |
| Deaths under 1 year | | per 1,000 | | per 1,000 | | per 1,000 | | per 1,000 | | per 1,000 | | per 1,000 |
| Phthisis | 21 | Births. 2.0 | 13 | Births. 1.2 | 20 | Births. 1.7 | 22 | Births. 1.9 | 18 | Births. 1.5 | 27 | Births. 2.2 |

CORPORATION TENEMENTS.

VITAL STATISTICS.

Comparative Table.

UNRESTRICTED DWELLINGS.

| | | | | |
|-----------------|-----|-----|-----|-------|
| Population 1913 | ... | ... | ... | 1,799 |
| Population 1914 | ... | ... | ... | 1,829 |
| Population 1915 | ... | ... | ... | 1,882 |
| Population 1916 | ... | ... | ... | 1,873 |
| Population 1917 | ... | ... | ... | 1,870 |
| Population 1918 | ... | ... | ... | 1,904 |

| | 1913. | | 1914. | | 1915. | | 1916. | | 1917. | | 1918. | |
|---------------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|
| | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. | Total number. | Rate per 1,000. |
| Births | 124 | 68·9 | 111 | 60·6 | 92 | 48·8 | 84 | 44·8 | 82 | 43·8 | 67 | 35·1 |
| Deaths | 40 | 22·2 | 34 | 18·5 | 40 | 21·2 | 50 | 26·6 | 33 | 17·6 | 50 | 26·2 |
| Infantile Mortality | 12 | 96·7 | 14 | 126·1 | 13 | 141·3 | 15 | 178·5 | 8 | 97·5 | 10 | 149·2 |
| Deaths under 1 year | | per 1,000 Births. | | per 1,000 Births. | | per 1,000 Births. | | per 1,000 Births. | | per 1,000 Births. | | per 1,000 Births. |
| Phthisis | 2 | 1·1 | Nil. | Nil. | 3 | 1·5 | 1 | 0·5 | 2 | 1·0 | 4 | 2·1 |

CORPORATION TENEMENTS.

VITAL STATISTICS.

ALL DWELLINGS.

Statistics as to Birth Rate and Infantile Mortality Rate in Corporation Dwellings as a whole for the 6 years 1913 to 1918:—

| Year. | Birth
Rate per 1,000
of population. | Infantile Mortality.
Deaths under 1 year
per 1,000 births. |
|-----------|---|--|
| 1913..... | 57·7 | 145·7 |
| 1914..... | 56·9 | 176·3 |
| 1915..... | 45·9 | 181·2 |
| 1916..... | 46·7 | 162·3 |
| 1917..... | 38·8 | 151·5 |
| 1918..... | 34·9 | 172·1 |

CORPORATION TENEMENTS.

ALL DWELLINGS.

| | | |
|--|--------|-------|
| Average Birth Rate for the 6 years 1913 to 1918 | ... .. | 45·3 |
| Average Death Rate for the 6 years 1913 to 1918 | ... .. | 27·2 |
| Average Infantile Mortality Rate (under 1 year) 1913 to 1918 | | 164·8 |
| Average Phthisis Death Rate for the 6 years 1913 to 1918 | | 1·7 |

HOUSING OF WORKING CLASSES ACTS, 1890-1909.

During the years 1916, 1917 and 1918, owing to conditions created by the war, no proceedings were taken under the Act.

The approximate number of insanitary houses existing on January 1st, 1919 (including added areas), were as follows:—

Table 1.

| | | |
|---------------------------------|--------|-------|
| No. of Courts | ... .. | 306 |
| No. of Court Houses | ... .. | 1,653 |
| Approximate No. of Front Houses | ... .. | 932 |

Table 2.

Showing the total number of houses dealt with during the years 1906 to 1918 inclusive.

FRONT HOUSES.

| Year. | Total
No. of
Houses
dealt
with. | Demo-
lished. | Ren-
dered
Sanitary. | In Schemes
but still
Occupied. | Closed. | Occu-
pied. |
|-------------|---|------------------|----------------------------|--------------------------------------|---------|----------------|
| 1906 | 193 | 120 | 60 | — | 13 | — |
| 1907 | 113 | 49 | 64 | — | — | — |
| 1908 | 46 | 17 | 29 | — | — | — |
| 1909 | 28 | 11 | 17 | — | — | — |
| 1910 | 33 | 33 | — | — | — | — |
| 1911 | 31 | 7 | 24 | — | — | — |
| 1912 | 87 | 28 | — | 38 | 21 | — |
| 1913 | 20 | 15 | 5 | — | — | — |
| 1914 | 61 | 45 | 10 | — | 6 | — |
| 1915 | 20 | 7 | 4 | — | 9 | — |
| 1916 | — | — | — | — | — | — |
| 1917 | — | — | — | — | — | — |
| 1918 | — | — | — | — | — | — |
| Total | 632 | 332 | 213 | 38 | 49 | — |

COURT HOUSES.

| Year. | Total
No. of
Houses
dealt
with. | Demo-
lished. | Ren-
dered
Sanitary. | In Schemes
but still
Occupied. | Closed. | Occu-
pied. |
|-------------|---|------------------|----------------------------|--------------------------------------|---------|----------------|
| 1906 | 966 | 757 | 101 | — | 108 | — |
| 1907 | 287 | 199 | 88 | — | — | — |
| 1908 | 274 | 174 | 100 | — | — | — |
| 1909 | 352 | 290 | 61 | — | 1 | — |
| 1910 | 303 | 225 | 69 | — | 9 | — |
| 1911 | 162 | 139 | 23 | — | — | — |
| 1912 | 595 | 232 | 4 | 127 | 232 | — |
| 1913 | 148 | 131 | 17 | — | — | — |
| 1914 | 175 | 139 | 11 | — | 25 | — |
| 1915 | 40 | 38 | — | — | 2 | — |
| 1916 | — | — | — | — | — | — |
| 1917 | — | — | — | — | — | — |
| 1918 | — | — | — | — | — | — |
| Total | 3,302 | 2,324 | 474 | 127 | 377 | — |

The nett result shows that during the past thirteen years, 2,656 insanitary dwellings have been demolished, 426 have been closed and await demolition or reconstruction, and 687 have been reconstructed and rendered sanitary, making a total for the twelve years of 3,769 (excluding those still occupied) dealt with as follows:

| | | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|-------------|
| 1906 | ... | ... | ... | ... | ... | ... | 1159 |
| 1907 | ... | ... | ... | ... | ... | ... | 400 |
| 1908 | ... | ... | ... | ... | ... | ... | 320 |
| 1909 | ... | . | .. | ... | ... | ... | 380 |
| 1910 | ... | ... | ... | ... | ... | ... | 336 |
| 1911 | .. | ... | ... | ... | ... | ... | 193 |
| 1912 | ... | ... | ... | ... | ... | ... | 517 |
| 1913 | ... | ... | ... | ... | ... | ... | 168 |
| 1914 | ... | ... | ... | ... | ... | ... | 236 |
| 1915 | ... | ... | ... | ... | ... | ... | 60 |
| 1916-17-18 | ... | ... | ... | ... | ... | ... | --- |
| Total ... | | | | | | | <u>3769</u> |

CELLAR DWELLINGS.

In December, 1912, there were 1,614 cellars let and occupied as separate dwellings. These occupied cellars have been kept under observation, and the attention of owners and occupiers has also been directed to the provisions of the Liverpool Corporation Act, 1908, which prohibits the occupation, after 1912, of a cellar as a separate dwelling if the floor is more than 2 feet below the level of the adjoining ground.

The owners have recognised the necessity for closing these insanitary dwellings, and in December, 1918, the number of occupied cellars had been reduced to 115.

It is probable that all cellars let as separate dwellings would have been closed if suitable dwellings had been available. Applications are continually being received by the occupants of cellar dwellings for Corporation dwellings.

CORPORATION TENEMENTS.

From time to time the Medical Officer has received requests to allow the Lodging House Inspectors to visit Corporation Tenements for the purpose of ascertaining if overcrowding or sub-letting exists. During the past ten years, 336 tenements have been visited at night, with the result that in 196 cases the tenements were found occupied contrary to the Committee's regulations; in some instances rooms were grossly overcrowded, or even indecently occupied. Many of these infringements would have been avoided had the inmates been differently distributed in the sleeping rooms, a condition quite easily complied with.

During the year the Director of Housing referred 7 Corporation tenements to the Medical Officer's Department for night visitation, as against 9 referred during the year 1917.

Night visits were paid to these tenements, with the result that 3 tenements were found to be sub-let and overcrowded. There was also one tenement found overcrowded, but not sub-let.

During the year, 7 cases of improper or irregular occupation were found in 4 Corporation tenements out of 7 visited, compared with 4 cases in 3 tenements out of 9 the preceding year.

Although many persons have been temporarily displaced as the result of the operations of the Housing Committee, it has not resulted in overcrowding in other parts of the City. The facts in regard to houses let in lodgings bears out this statement (see page 84).

In December, 1885, the Local Government Board allowed Bye-laws which provided for 350 cubic feet per adult (two children below 12 years of age to count as one adult). In January, 1901, the Bye-laws were further amended, requiring 400 cubic feet per adult, and 200 cubic feet per child below 10 years of age, for sleeping accommodation.

Although the requirements in respect to cubic space have materially increased, and two additional Inspectors have been appointed making a total number of 17), and the number of night visits increased, the cases of overcrowding have decreased. The figures shown in the table on page 84 are sufficient answer to the suggestion that the removal of slum areas resulted in an increase of sub-letting and overcrowding.

UNOCCUPIED HOUSES.

The number of empty houses in Liverpool at the end of 1918, according to a return supplied by the Head Constable, at rents of 5s. and under per week was 6, and over 5s. and under 8s. per week 45, making a total of 51, of which 18 were insanitary.

For the previous year the figure was 84, which number had been gradually reduced from 4,895 in 1910.



A

The following tables I, II, III, IV, and marked also A, B, C, D, are prepared pursuant to an instruction of the Local Government Board.

CITY OF LIVERPOOL.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1918 AND PREVIOUS YEARS.

| YEAR. | Population estimated to Middle of each year. | BIRTHS. | | | TOTAL DEATHS REGISTERED IN THE DISTRICT. | | TRANSFERABLE DEATHS. ‡ | | NETT DEATHS BELONGING TO THE DISTRICT. | | | |
|-----------|--|---------------------|---------|-------|--|-------|--|--|--|----------------------------|--------------|-------|
| | | Uncorrected Number. | Nett. | | Number. | Rate. | of Non-residents registered in the District. | of Residents not registered in the District. | Under 1 year of age. | | At all ages. | |
| | | | Number. | Rate. | | | | | Number. | Rate per 1000 Nett Births. | Number. | Rate. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1913..... | 756553 | 22627 | 22555 | 29.8 | 13930 | 18.4 | 673 | 401 | 2987 | 132 | 13658 | 18.0 |
| 1914..... | 767992 | 23143 | 23065 | 30.0 | 15320 | 19.9 | 718 | 444 | 3219 | 139 | 15046 | 19.5 |
| 1915..... | 772595 | 21653 | 21586 | 27.9 | 14585 | 18.9 | 676 | 569 | 2866 | 133 | 14478 | 18.7 |
| 1916..... | 777247 | 20756 | 20679 | 26.6 | 14119 | 18.1 | 834 | 658 | 2421 | 117 | 13943 | 17.9 |
| 1917..... | 781948 | 17931 | 17906 | 22.9 | 13144 | 16.7 | 804 | 753 | 2071 | 115 | 13093 | 16.7 |
| 1918..... | 781948 | 17171 | 17133 | 21.9 | 16077 | 20.5 | 1626 | 816 | 2137 | 124 | 15267 | 19.5 |

NOTES.—This Table is arranged to show the gross births and deaths registered in the district during the calendar year, and the births and deaths properly belonging to it with the corresponding rates. The rates should be calculated per 1,000 of the estimated gross population as stated in Column 2, without the use of the standardising factor for the district given in the Annual Report of the Registrar-General. In a district in which large Public Institutions for the sick or infirm seriously affect the Statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

* In Column 6 are to be included the whole of the deaths registered during the calendar year as having actually occurred within the district, but excluding the deaths of Soldiers and Sailors that have occurred in hospitals and institutions in the district. Information as to the number and causes of such deaths should, however, be given in the text of the report. (See Table D² in Appendix.)

In Column 12 is entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in Column 9. Deaths in Column 10 are similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

‡ “Transferable Deaths” are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, *e.g.*, casuals, are not included in Columns 8 or 9, except in certain instances under 3 (b) below. In Column 8 the number of transferable deaths of “non-residents” are deducted, and in Column 9 the number of deaths of “residents” registered outside the district are added in calculating the net death-rate of the district.

The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for the sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from violence are to be referred (a) to the district of residence, under the general rule; (b) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; (c) failing this, to the district where death occurred, if known; and (d) failing this, to the district where the body was found.

Area of District in acres
(land and inland
water) } 21,219.

Total population at all ages.....753,353 } At Census
of
Total families or separate occupiers ...153,307 } 1911.



TABLE II
CITY OF LIVERPOOL.

Cases of Infectious Disease notified during the Year 1918.

| NOTIFIABLE DISEASE | NUMBER OF CASES NOTIFIED. | | | | | | | |
|--|---------------------------|----------------|---------|----------|-----------|-----------|-----------|-----------------|
| | At all Ages. | At Ages—Years. | | | | | | |
| | | Under 1 | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 45. | 45 to 65. | 65 and upwards. |
| Small-pox | ... | ... | ... | ... | ... | ... | ... | ... |
| Cholera | ... | ... | ... | ... | ... | ... | ... | ... |
| Plague | ... | ... | ... | ... | ... | ... | ... | ... |
| Diphtheria (including Membranous Croup) | 1494 | 13 | 506 | 755 | 142 | 66 | 12 | ... |
| Erysipelas | 454 | 14 | 17 | 44 | 70 | 133 | 133 | 43 |
| Scarlet fever | 3020 | 20 | 761 | 1946 | 218 | 70 | 5 | ... |
| Typhus fever | 2 | ... | ... | 1 | 1 | ... | ... | ... |
| Enteric fever | 64 | ... | 1 | 12 | 35 | 13 | 3 | ... |
| Paratyphoid fever | 1 | ... | ... | ... | 1 | ... | ... | ... |
| Relapsing fever | ... | ... | ... | ... | ... | ... | ... | ... |
| Continued fever | ... | ... | ... | ... | ... | ... | ... | ... |
| Puerperal fever | 28 | ... | ... | ... | 3 | 24 | 1 | ... |
| Cerebro-Spinal Meningitis | 17 | 5 | 5 | 5 | 2 | ... | ... | ... |
| Poliomyelitis | 6 | 1 | 1 | 4 | ... | ... | ... | ... |
| Ophthalmia Neonatorum | 587 | 587 | ... | ... | ... | ... | ... | ... |
| Pulmonary Tuberculosis | 2742 | 2 | 55 | 477 | 482 | 1200 | 493 | 33 |
| Tuberculosis other than Pulmonary | 767 | 21 | 168 | 417 | 100 | 37 | 20 | 4 |
| Anthrax | 10 | ... | ... | ... | 2 | 6 | 2 | ... |
| Measles and German Measles | 6665 | 426 | 3370 | 2697 | 109 | 56 | 7 | ... |
| Totals | 15857 | 1089 | 4884 | 6358 | 1165 | 1605 | 676 | 80 |

City Hospital North, Everton District.

„ „ South, Toxteth „

„ „ East, West Derby „

„ „ Fazakerley Annexe, Fazakerley District.

„ „ Park Hill Sanatorium, Toxteth District

} All within the City.

Deysbrook Hospital, West Derby Rural, Outside the City.

All the above Institutions are provided by the Corporation of Liverpool.

The Corporation also have at their disposal 10 beds in the David Lewis Northern Hospital, and 40 beds in Walton Institution.

TABLE III.
CITY OF LIVERPOOL.
Causes of, and ages at, Death during the Year 1918.
(See notes at back.)

C

| Causes of Death. | NETT DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT (a). | | | | | | | | | Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District (b). |
|---|--|---------------|----------------------|----------------------|-----------------------|------------------------|------------------------|------------------------|-----------------|---|
| | All ages. | Under 1 year. | 1 and under 2 years. | 2 and under 5 years. | 5 and under 15 years. | 15 and under 25 years. | 25 and under 45 years. | 45 and under 65 years. | 65 and upwards. | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| All causes { Certified (c) | 14937 | 2034 | 1080 | 1167 | 1018 | 1006 | 2624 | 3216 | 2792 | 6530 |
| { Uncertified | 330 | 103 | 16 | 16 | 17 | 11 | 32 | 65 | 70 | 7 |
| 1. Enteric Fever | 13 | — | — | — | 3 | 3 | 4 | 3 | — | 17 |
| 2. Small-pox | — | — | — | — | — | — | — | — | — | — |
| 3. Measles | 407 | 76 | 166 | 144 | 18 | 3 | — | — | — | 135 |
| 4. Scarlet Fever | 133 | 4 | 12 | 57 | 50 | 7 | 3 | — | — | 129 |
| 5. Whooping Cough | 364 | 112 | 127 | 112 | 13 | — | — | — | — | 86 |
| 6. Diphtheria and Croup | 228 | 6 | 34 | 97 | 85 | 4 | 2 | — | — | 196 |
| 7. Influenza | 1388 | 32 | 45 | 118 | 147 | 196 | 521 | 245 | 84 | 489 |
| 8. Erysipelas | 15 | 2 | — | — | — | — | 3 | 6 | 4 | 16 |
| 9. Phthisis (Pulmonary Tuberculosis) ... | 1400 | — | 8 | 25 | 92 | 295 | 608 | 333 | 39 | 562 |
| 10. Tuberculous Meningitis | 133 | 16 | 18 | 37 | 39 | 13 | 7 | 3 | — | 72 |
| 11. Other Tuberculous Diseases | 258 | 18 | 26 | 40 | 61 | 48 | 32 | 24 | 9 | 114 |
| 12. Cancer, malignant disease. | 750 | 1 | — | — | 3 | 5 | 93 | 398 | 250 | 294 |
| 13. Rheumatic Fever | 24 | — | — | — | 8 | 5 | 5 | 5 | 1 | 9 |
| 14. Meningitis (See note (d)) | 93 | 23 | 20 | 20 | 22 | 3 | 1 | 3 | 1 | 35 |
| 15. Organic Heart Disease | 860 | — | — | — | 26 | 63 | 156 | 308 | 307 | 309 |
| 16. Bronchitis | 1413 | 194 | 75 | 31 | 15 | 15 | 98 | 445 | 540 | 368 |
| 17. Pneumonia (all forms) | 2605 | 356 | 349 | 343 | 259 | 207 | 526 | 388 | 177 | 1424 |
| 18. Other diseases of Respiratory organs | 183 | 14 | 9 | 12 | 8 | 6 | 43 | 56 | 35 | 24 |
| 19. Diarrhoea and Enteritis. (See note (e)) | 369 | 279 | 90 | — | — | — | — | — | — | 127 |
| 20. Appendicitis and Typhlitis | 34 | — | — | — | 13 | 7 | 9 | 4 | 1 | 28 |
| 21. Cirrhosis of Liver | 29 | — | — | — | — | — | 4 | 20 | 5 | 16 |
| 21a. Alcoholism | 9 | — | — | — | — | — | 2 | 6 | 1 | 6 |
| 22. Nephritis and Bright's Disease | 346 | 3 | 1 | 5 | 14 | 12 | 90 | 151 | 70 | 89 |
| 23. Puerperal Fever | 17 | — | — | — | — | 3 | 13 | 1 | — | 17 |
| 24. Other accidents and diseases of Pregnancy and Parturition | 35 | — | — | — | — | 4 | 31 | — | — | 14 |
| 25. Congenital Dehility and Malformation, including Premature Birth | 696 | 658 | 27 | 9 | 2 | — | — | — | — | 202 |
| 26. Violent Deaths, excluding Suicide ... | 409 | 34 | 35 | 53 | 60 | 34 | 60 | 86 | 47 | 311 |
| 27. Suicide | 32 | — | — | — | — | 2 | 13 | 14 | 3 | 8 |
| 28. Other Defined Diseases | 2948 | 304 | 53 | 79 | 97 | 80 | 317 | 745 | 1273 | 1416 |
| 29. Diseases, ill-defined or unknown | 76 | 5 | 1 | 1 | — | 2 | 15 | 37 | 15 | 14 |
| Totals | 15267 | 2137 | 1096 | 1183 | 1035 | 1017 | 2656 | 3281 | 2862 | 6537 |
| Sub-Entries included in above figures— | | | | | | | | | | |
| Cerebro-Spinal Meningitis | 12 | 3 | 2 | 2 | 4 | 1 | — | — | — | 10 |
| Poliomyelitis | 5 | 1 | — | 2 | 2 | — | — | — | — | 1 |
| *Typhus Fever | — | — | — | — | — | — | — | — | — | — |
| *Anthrax | — | — | — | — | — | — | — | — | — | — |
| *Pneumonia | 1440 | 81 | 79 | 86 | 141 | 185 | 451 | 307 | 110 | 947 |

* Sub-Entries should here be made for other deaths which it is desirable to distinguish, on account of their administrative importance or special interest (e.g. any deaths from Anthrax, Typhus or Glanders, which have been included under 28, *Other Defined Diseases*; or deaths from pneumonia other than broncho pneumonia which have been included under 17, *Pneumonia all forms*).

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which has been consulted and followed in all cases of doubt.

- (a) All "Transferable Deaths" of residents, *i.e.*, of persons resident in the District who have died outside it, are *included* with the other deaths in Columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who have died in the District, are in like manner *excluded* from these columns. For the precise meaning of the term "transferable deaths" *see* footnote to Table I.

The total deaths in Column 2 of Table III. equal the figures for the year in Column 12 of Table I.

- (b) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are entered in the last column of Table III.
- (c) All deaths certified by registered Medical Practitioners and all Inquest cases are classed as "Certified"; all other deaths are regarded as "Uncertified."
- (d) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro-Spinal Meningitis.
- (e) Title 19 has been used for deaths from Diarrhoea and Enteritis of children under 2 years of age. (In the "Short List" deaths from Diarrhoea, and Enteritis under 2 years are included under Title 19; these at 2 years and over being placed under Title 28.)

TABLE IV.
CITY OF LIVERPOOL.

INFANT MORTALITY DURING THE YEAR 1918.

Nett Deaths from stated Causes at various Ages under One Year of Age.

(See Note (a) at back.)

| CAUSE OF DEATH. | | | | | | | Under 1 Week. | 1-2 Weeks. | 2-3 Weeks. | 3-4 Weeks. | Total under 4 Weeks. | 4 Weeks and under 3 Months. | 3 Months and under 6 Months. | 6 Months and under 9 Months. | 9 Months and under 12 Months. | Total Deaths under One Year. |
|-----------------------------------|-------------|-----|-----|-----|-----|-----|---------------|------------|------------|------------|----------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|------------------------------|
| All Causes. | Certified | ... | ... | ... | ... | ... | 349 | 85 | 79 | 55 | 568 | 345 | 389 | 348 | 384 | 2034 |
| | Uncertified | ... | ... | ... | ... | ... | 50 | — | 3 | 2 | 55 | 17 | 10 | 15 | 6 | 103 |
| Small-pox | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | — | — | — | — |
| Chicken-pox | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | — | — | 1 | 1 |
| Measles | ... | ... | ... | ... | ... | ... | — | — | — | — | — | 1 | 8 | 19 | 48 | 76 |
| Scarlet Fever | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | — | 1 | 3 | 4 |
| Whooping Cough | ... | ... | ... | ... | ... | ... | — | — | — | — | — | 11 | 24 | 38 | 39 | 112 |
| Diphtheria and Croup | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | 1 | 3 | 2 | 6 |
| Influenza | ... | ... | ... | ... | ... | ... | — | 1 | 1 | — | 2 | 3 | 7 | 9 | 11 | 32 |
| Erysipelas | ... | ... | ... | ... | ... | ... | — | — | 1 | — | 1 | — | 1 | — | — | 2 |
| Tuberculous Meningitis | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | 6 | 4 | 6 | 16 |
| Abdominal Tuberculosis (b) | ... | ... | ... | ... | ... | ... | — | — | — | — | — | 4 | 5 | 3 | 2 | 14 |
| Other Tuberculous Diseases | ... | ... | ... | ... | ... | ... | — | — | — | — | — | 1 | — | 3 | — | 4 |
| Meningitis (not Tuberculous) | ... | ... | ... | ... | ... | ... | 1 | — | 1 | — | 2 | — | 4 | 7 | 7 | 20 |
| Convulsions | ... | ... | ... | ... | ... | ... | 28 | 9 | 5 | 9 | 51 | 30 | 18 | 33 | 20 | 152 |
| Laryngitis | ... | ... | ... | ... | ... | ... | — | — | — | — | — | — | 1 | — | 2 | 3 |
| Bronchitis | ... | ... | ... | ... | ... | ... | 1 | 7 | 5 | 9 | 22 | 47 | 43 | 38 | 44 | 194 |
| Pneumonia (all forms) | ... | ... | ... | ... | ... | ... | 1 | 5 | 5 | 5 | 16 | 52 | 79 | 102 | 107 | 356 |
| Diarrhoea | ... | ... | ... | ... | ... | ... | — | 1 | 2 | 1 | 4 | 29 | 67 | 40 | 44 | 184 |
| Enteritis | ... | ... | ... | ... | ... | ... | 1 | 2 | 2 | 1 | 6 | 18 | 34 | 20 | 17 | 95 |
| Gastritis | ... | ... | ... | ... | ... | ... | 1 | 1 | — | — | 2 | 4 | 6 | 4 | 2 | 18 |
| Syphilis | ... | ... | ... | ... | ... | ... | 5 | — | — | 2 | 7 | 17 | 12 | 1 | — | 37 |
| Rickets | ... | ... | ... | ... | ... | ... | — | — | — | — | — | 1 | 2 | 1 | 2 | 6 |
| Suffocation, overlying | ... | ... | ... | ... | ... | ... | 4 | — | 2 | 3 | 9 | 14 | 3 | — | — | 26 |
| Injury at Birth | ... | ... | ... | ... | ... | ... | 1 | 2 | 2 | — | 5 | — | — | — | — | 5 |
| Atelectasis | ... | ... | ... | ... | ... | ... | 16 | 1 | — | 1 | 18 | 6 | — | — | — | 24 |
| Congenital Malformations (c) | ... | ... | ... | ... | ... | ... | 17 | 11 | 3 | 3 | 34 | 8 | 5 | 3 | 3 | 53 |
| Premature Birth | ... | ... | ... | ... | ... | ... | 264 | 25 | 34 | 9 | 332 | 35 | 5 | 1 | — | 373 |
| Atrophy, Debility and Marasmus... | ... | ... | ... | ... | ... | ... | 45 | 14 | 13 | 12 | 84 | 62 | 54 | 19 | 13 | 232 |
| Other Causes | ... | ... | ... | ... | ... | ... | 14 | 6 | 6 | 2 | 28 | 19 | 14 | 14 | 17 | 92 |
| | | | | | | | 399 | 85 | 82 | 57 | 623 | 362 | 399 | 363 | 390 | 2137 |

Nett Births in the year { Legitimate ... 16,209
Illegitimate ... 924

Nett Deaths in the year of { Legitimate Infants 1,935
Illegitimate Infants 202

NOTES TO TABLE IV.

- (a) The total in the last column of Table IV. should equal the total in column 10 of Table I., and in column 3 of Table III.
- (b) Under Abdominal Tuberculosis are to be included deaths from Tuberculous Peritonitis and Enteritis and from *Tabes Mesenterica*.
- (c) The total deaths from Congenital Malformations, Premature Birth, Atrophy, Debility and Marasmus, should equal the total in Table III. under the heading Congenital Debility and Malformation, including Premature Birth.

Want of Breast Milk is included under Atrophy and Debility.
- (d) For references to the meaning of any other headings, *see* notes attached to Table III.

In recording the facts under the various headings of Tables I , II., III. and IV., attention has been drawn to the notes on the Tables.

CITY OF LIVERPOOL.

Deaths of Soldiers and Sailors on Active Service, in the City of Liverpool during the year 1918 and recorded as per Memorandum of the Registrar General dated 1st November, 1915.

| Cause of Death. | Number
of
Deaths. | Cause of Death. | Number
of
Deaths. |
|----------------------------------|-------------------------|-----------------------------------|-------------------------|
| Enteric Fever | 4 | Disease of Larynx | 1 |
| Scarlet Fever | 3 | Bronchitis... .. | 6 |
| Measles | 7 | Broncho Pneumonia | 84 |
| Diphtheria | 1 | Pneumonia | 327 |
| Influenza | 234 | Pleurisy | 5 |
| Erysipelas... .. | 1 | Asthma | 1 |
| Malaria | 9 | Other Respiratory Diseases | 1 |
| Dysentery... .. | 1 | Disease of Mouth | 1 |
| Anthrax | 2 | „ Pharynx | 1 |
| Septicæmia | 1 | Ulcer of S omach | 4 |
| Tuberculosis, Pulmonary | 16 | Diarrhœa and Enteritis | 2 |
| „ Peritonitis | 1 | Appendicitis | 4 |
| „ Other Organs | 5 | Intestinal Obstruction | 3 |
| Syphilis | 1 | Cirrhosis | 1 |
| Cancer, Stomach and Liver | 9 | Disease of Liver | 1 |
| „ Intestines | 2 | Peritonitis | 6 |
| „ Other forms | 6 | Nephritis | 5 |
| Rheumatic Fever | 1 | Carbuncle | 1 |
| Diabetes | 2 | Suicide by Cutting Throat | 1 |
| Leucocythemia | 1 | „ Jumping from a High | 1 |
| Anæmia | 1 | „ Place | 1 |
| Meningitis... .. | 2 | „ Coal Gas | 1 |
| Cerebro Spinal-Fever | 14 | Burns | 1 |
| Paralysis | 1 | Coal Gas Poisoning | 1 |
| Other Diseases of Nervous | 2 | Gas Poisoning | 1 |
| System | 2 | Trench Feet | 1 |
| Mastoid Disease | 3 | Sunstroke | 1 |
| Pericarditis | 2 | Accidentally Drowned | 2 |
| Acute Endocarditis | 3 | „ Shot | 1 |
| Valvular Disease | 10 | Injuries | 14 |
| Dis. Blood Vessels | 2 | Gunshot Wounds | 59 |
| Embolism and Thrombosis | 3 | Ill-defined causes... .. | 1 |
| | | | 889 |

DEATHS REGISTERED IN THE CITY OF LIVERPOOL,
DURING THE YEAR 1918.

[illegible]

